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COASTAL OCEANOGRAPHY IN THE BEAUFORT SEA SUMMER 1985

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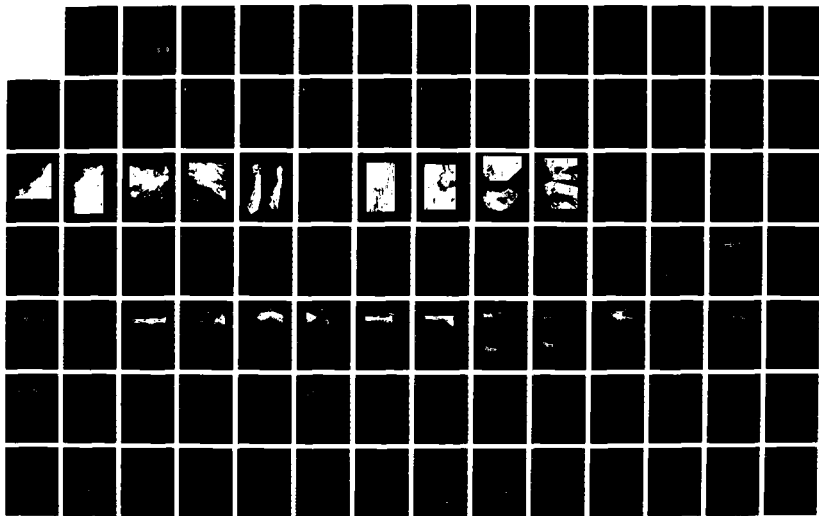
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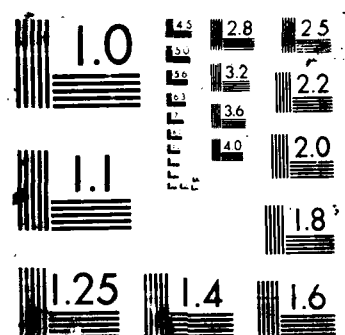
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Coastal Oceanography in the Beaufort Sea, Summer 1985

A Joint Report by

P. Becker and G. R. Garrison
The Applied Physics Laboratory
University of Washington

and

R. K. Perry
The Arctic Submarine Laboratory
Naval Ocean Systems Center

APL-UW-8705
July 1987

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Applied Physics Laboratory
University of Washington
Seattle, Washington 98105

Arctic Submarine Laboratory
Naval Ocean Systems Center
San Diego, California 92152

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CONTENTS

	<i>Page</i>
I. Introduction	1
II. The Cruise.....	3
III. Weather and Position Data.....	5
IV. Satellite Imagery	17
A. Ice Coverage	17
B. Infrared Temperatures	17
V. Ice Conditions.....	28
VI. River Runoff.....	33
VII. Temperature and Salinity Measurements	36
A. Instrumentation	36
B. Calibration.....	37
C. Vertical Profiles.....	37
D. TS Diagrams.....	39
VIII. Section Plots	41
IX. Surface Conditions	69
A. Surface Properties, 1985	69
B. Other Cruises in Past Years.....	73
C. Satellite IR Patterns.....	73
X. Analysis of Water Exchange	74
A. Atlantic Water	74
B. Chukchi Bottom Layer	74
C. Coastal Flow from the South.....	79
D. Mackenzie River Water.....	80
E. Water Types Seen in the TS Diagrams.....	81
XI. Conclusions	86
A. Chukchi Bottom Water.....	86
B. Alaskan Coastal Current.....	86
C. Mackenzie River Outflow.....	86
References	87
Appendix A, CTD Profiles	
Appendix B, TS Diagrams	
Appendix C, Surface Conditions in Prior Years	

LIST OF FIGURES

	<i>Page</i>
Figure 1. Location of the survey off the north coast	1
Figure 2. Location of the Barrow Canyon.....	2
Figure 3. Location of all stations during the <i>Polar Sea</i> cruise in August–September 1985	4
Figure 4. Ice conditions off Pt. Barrow on 4 August as seen in a LANDSAT image	18
Figure 5. Ice conditions off the coast on 20 August as seen in a NOAA satellite image.....	19
Figure 6. Ice conditions off Harrison Bay on 10 September as seen in a LANDSAT image.....	20
Figure 7. Ice conditions off the coast from Pt. Barrow to Barter Island on 18 September as seen in a NOAA satellite image.....	21
Figure 8. An enhanced NOAA IR image on 5 August that shows by gray scale the transition from white for the ice below -2°C to black at 8°C for the warm open water along the shore.....	22
Figure 9. A NOAA satellite image on 5 August that shows an enhanced IR for $0-4^{\circ}\text{C}$	22
Figure 10. A NOAA satellite image for 25 August with a $0-4^{\circ}$ IR enhancement.	24
Figure 11. An enlarged enhanced image of the Mackenzie River outflow on 5 August for comparison with Figure 8.....	25
Figure 12. An enhanced image for the southern Chukchi Sea on 5 August showing the pattern of the northerly current past Pt. Hope.....	26
Figure 13. Another enhancement for 17 August showing the pattern of the northerly current past Pt. Hope	26
Figure 14. Two enhancements for 5 September showing the spread of the coastal current north of Pt. Hope.....	27
Figure 15. Ice cover reported for 18 August by Environemnt Canada	28
Figure 16. Ice cover reported for 27 August by Environment Canada	29
Figure 17. Ice cover reported for 3 September by Environment Canada.....	29
Figure 18. Ice cover reported for 9 September by Environment Canada.....	30
Figure 19. Ice cover reported for 13 September by Environment Canada.....	30
Figure 20. Ice cover reported for 3 September. This is representative of the first Barrow Canyon study.....	31

Figure 21.	Ice cover reported for 13 September. This is representative of the second Barrow Canyon study.....	31
Figure 22.	Lines representing 9/10 ice cover for weekly intervals during the cruise.....	32
Figure 23.	Lines representing 2/10 ice cover for weekly intervals during the cruise.....	32
Figure 24.	Monthly totals for Mackenzie River flow, 1973-1984.....	33
Figure 25.	Annual Mackenzie River flow for years 1973-1984 as reported by Environment Canada. A preliminary value for 1985 has been added.....	34
Figure 26.	Sample presentation of CTD profile and tabulated data at 5-15 m intervals	38
Figure 27.	An example of the TS diagrams that appear in Appendix B	40
Figure 28.	Selected cross sections for the survey	41
Figure 29.	A longitudinal section and four cross sections for the first survey of the Barrow Canyon area.....	42
Figure 30.	A longitudinal section and four cross sections for the second survey of the Barrow Canyon area.....	42
Figure 31.	Section G', an alternate to Section G that better traces the bottom water down the Barrow Canyon.....	43
Figure 32.	Line A cross sections showing temperature and salinity	43
Figure 33.	Line B cross sections showing temperature and salinity	44
Figure 34.	Line C cross sections showing temperature and salinity	45
Figure 35.	Line D cross sections showing temperature and salinity	46
Figure 36.	Line E cross sections showing temperature and salinity.....	47
Figure 37.	Line F cross sections showing temperature and salinity	48
Figure 38.	Line G cross sections showing temperature and salinity	49
Figure 39.	Line G' cross sections showing temperature and salinity	50
Figure 40.	Line H cross sections showing temperature and salinity	51
Figure 41.	Line I cross sections showing temperature and salinity.....	52
Figure 42.	Line J cross sections showing temperature and salinity	53
Figure 43.	Line K cross sections showing temperature and salinity	54
Figure 44.	Line L cross sections showing temperature and salinity.....	54
Figure 45.	Line M cross sections showing temperature and salinity	55

Figure 46.	Line N cross sections showing temperature and salinity	55
Figure 47.	Line O cross sections showing temperature and salinity	56
Figure 48.	Line P cross sections showing temperature and salinity	57
Figure 49.	Line Q cross sections showing temperature and salinity	58
Figure 50.	Line R cross sections showing temperature and salinity	59
Figure 51.	Line S cross sections showing temperature and salinity	60
Figure 52.	Maximum temperature ($^{\circ}\text{C}$) for each CTD station. For the Barrow Canyon area, see Figure 53	61
Figure 53.	Maximum temperature ($^{\circ}\text{C}$) for each CTD station in the two Barrow Canyon surveys	62
Figure 54.	Minimum temperature ($^{\circ}\text{C}$) for each CTD station. For the Barrow Canyon area, see Figure 55	63
Figure 55.	Minimum temperature ($^{\circ}\text{C}$) for each CTD station in the two Barrow Canyon surveys	64
Figure 56.	Stations with maximum temperature exceeding 1°C	65
Figure 57.	Stations with maximum temperature exceeding 1°C in the two Barrow Canyon surveys	66
Figure 58.	Stations with minimum temperature $<-1.5^{\circ}\text{C}$	67
Figure 59.	Stations with minimum temperature $<-1.5^{\circ}\text{C}$ in the two Barrow Canyon surveys	68
Figure 60.	Surface layer temperatures ($^{\circ}\text{C}$) from the CTD profiles. For the Barrow Canyon area, see Figure 61	69
Figure 61.	Surface layer temperatures ($^{\circ}\text{C}$) from the CTD profiles for the two Barrow Canyon surveys	70
Figure 62.	Surface layer salinities (‰) from the CTD profiles. For the Barrow Canyon area, see Figure 63	71
Figure 63.	Surface layer salinities (‰) from the CTD profiles for the two Barrow Canyon surveys	72
Figure 64.	Chukchi Sea bottom water with constant properties ($T=-1.7^{\circ}\text{C}$, $S=32.7\text{‰}$) for the two Barrow Canyon surveys.....	75
Figure 65.	Extent of the Chukchi bottom water when defined as $T<-1.6^{\circ}\text{C}$	76
Figure 66.	Extent of coldest Chukchi bottom water ($T<-1.7^{\circ}\text{C}$)	76
Figure 67.	Extent of Chukchi bottom water ($T<-1.6^{\circ}\text{C}$) for the two Barrow Canyon surveys	77

Figure 68.	Extent of the coldest Chukchi bottom water ($T < -1.7^{\circ}\text{C}$) for the two Barrow Canyon surveys	78
Figure 69.	Distinct layers of water entering the survey area along the coast from the southwest	79
Figure 70.	Composite TS diagram for the first Barrow Canyon survey, stations 47-147 (APL stations only)	81
Figure 71.	Composite TS diagram for the second Barrow Canyon survey, stations 174-263 (APL stations only)	82
Figure 72.	Composite TS diagram for the central portion of the survey area, stations 37, 41, and 159	83
Figure 73.	Composite TS diagram for the eastern portion of the survey area, stations 1, 11, 12, 24-32, 34, and 35	84
Figure 74.	The outline of various water types on the TS diagram	85

ABSTRACT

An oceanographic cruise along the north coast of Alaska and Canada in August and September 1985 reveals evidence of how the Alaskan Coastal Current from the southwest and the Mackenzie River outflow in the eastern portion influence oceanographic conditions in the Beaufort Sea. The coastal current crowds the shore and at depth displaces some of the cold, saline bottom water that drains from the Chukchi Sea through the Barrow Canyon in the spring. The eastward extent of the coastal current is about 148°W longitude, and the westward progression of the Mackenzie River water about 141°W longitude. The ice and weather conditions during the survey appeared to influence water exchange.

I. INTRODUCTION

An icebreaker cruise along the north coast of Alaska in August and September 1985 provided the opportunity to study the influence of the Alaskan Coastal Current, which carries Bering Sea water northward into the Chukchi and Beaufort seas, and of the Mackenzie River, which pours fresh water into the eastern portion of the Beaufort Sea. The area covered by the survey is shown in Figure 1.

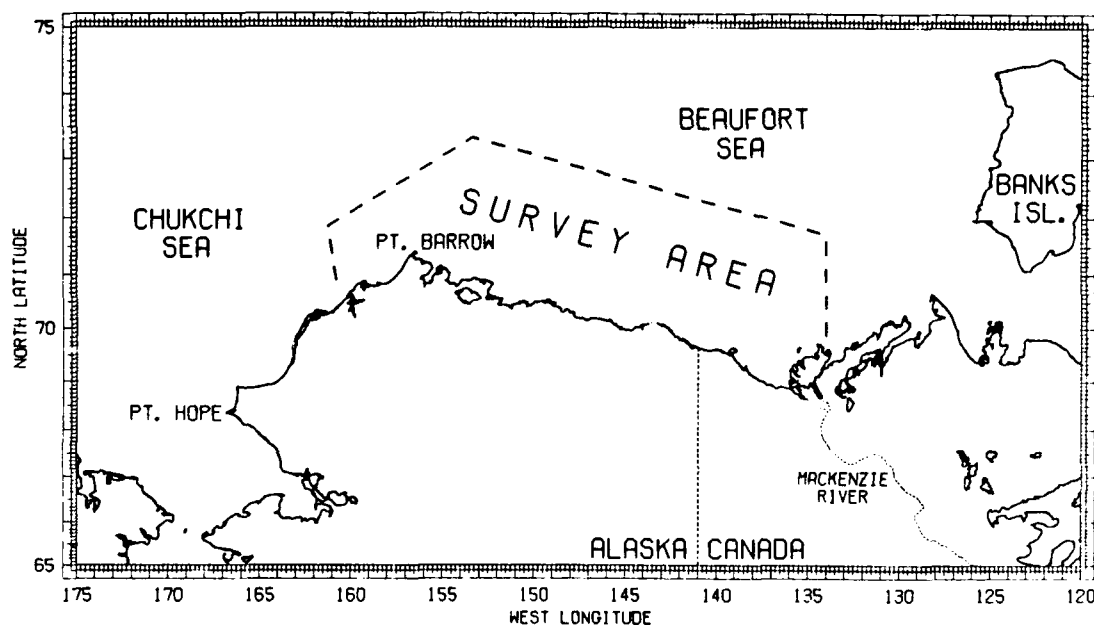


Figure 1. Location of the survey off the north coast.

Oceanographic measurements have been made off the north coast of Alaska by the Applied Physics Laboratory since 1971.¹⁻³ The coastal current has been studied extensively.⁴⁻⁷ This northward flow of water is apparently caused by differences⁸ in the levels of the Arctic Ocean and the Bering Sea and is modified by regional atmospheric pressure differences (which sometimes even reverse the direction). As the current moves northward, it draws in the waters of Norton and Kotzebue sounds which have been warmed by the sun. A large part of the resulting mass of warm water moves along the coast from Pt. Hope to Pt. Barrow and enters the Beaufort Sea, where it dissipates into large eddies. Measurements in the Beaufort Sea in the fall of 1980,⁹ 1982,¹⁰ and 1984¹¹ showed thin layers of this warm intrusion as far as 150 miles from the coast. One purpose of the study reported here was to learn what happens to this warm water (up to 10°C). Where does it go? How rapidly does it mix?

Ice cover in the Beaufort Sea often shows a seasonal deterioration which may be due to the warm surface layer caused by runoff from the Mackenzie River. The trajectory and mixing of this plume of warm, fresh water have not been fully documented. Measurements in 1974 and 1975 by Herlinveaux and de Lange Boom¹² showed oceanographic conditions closer to shore and farther east than the present study. Measurements by Huggett et al.¹³ from 1973–1975 gave information on currents near the Mackenzie River outflow and to the east. A second purpose of the 1985 study was to determine the oceanographic influence of the Mackenzie River in the southern Beaufort Sea. Does it become a thin surface layer, or does it mix downward and lose identity?

The cruise started at 134°W longitude, just east of Mackenzie Bay, and progressed westward to Pt. Barrow. The Barrow Canyon area, shown in Figure 2, was then traversed twice, at a 10 day interval, to study not only the warm intrusion but also the distribution of the cold Chukchi water that flows down the Barrow Canyon in the spring and early summer.

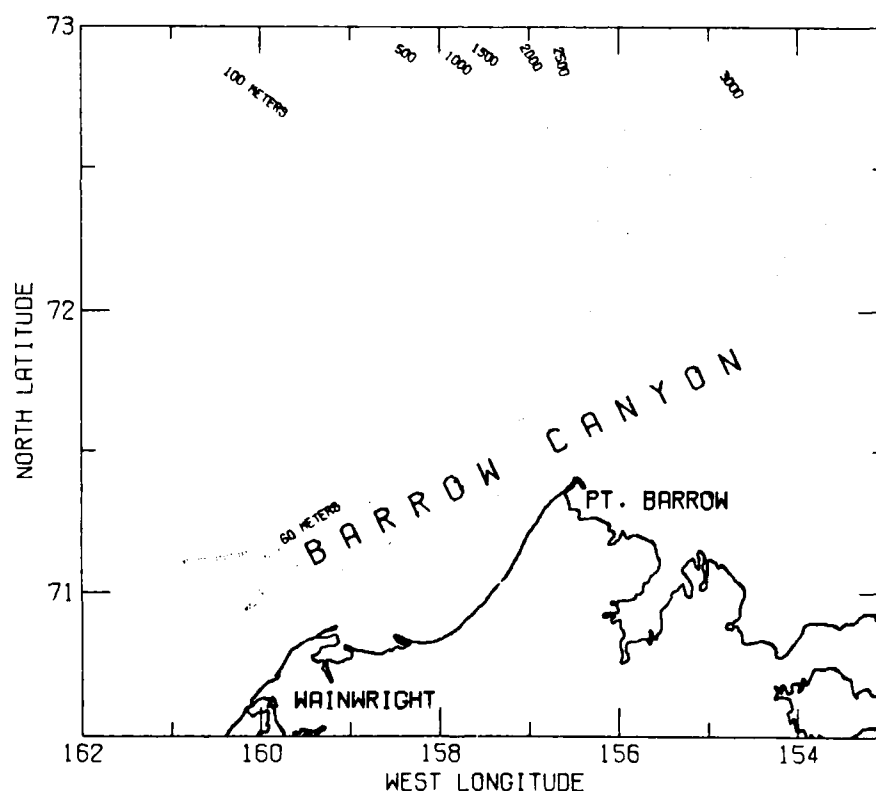


Figure 2. Location of the Barrow Canyon.

II. THE CRUISE

The measurements reported here were taken between 17 August and 15 September from USCG icebreaker *Polar Sea* as it cruised along the north coast of Canada and Alaska. The scientific party consisted of cartographer and chief scientist Robert Perry, physicist Edward Floyd, physicist Burton Markham, and oceanographer Randall Judd from the Arctic Submarine Laboratory (ASL) of the Naval Ocean Systems Center (NOSC) and oceanographer Peter Becker from the Applied Physics Laboratory (APL) of the University of Washington. The oceanographic stations consisted mainly of conductivity-temperature-depth (CTD) profiles.

Prior to the cruise, Becker met with Kristina Ahlnäs at the Geophysical Institute of the University of Alaska, Fairbanks, to collect recent satellite images of the area to be traversed and to discuss criteria for satellite coverage during the cruise. Of the potential NOAA satellite coverage available, amounting to some 30 satellite passes, an order was placed for 40% of the imagery during 15–31 August and 60% during 1–15 September, with no coverage east of 148°W after 1 September. LANDSAT coverage was also requested.

The scientific party met at Prudhoe Bay on 14 August, where men and equipment were transferred to the *Polar Sea* by the ship's helicopters.

Hydrographic stations commenced on 17 August enroute to the easternmost station at 134°W longitude. (See Figure 3 for location of stations.) Heavy ice was encountered shortly after leaving Prudhoe Bay. The pack consisted of up to 70% old floes and multiyear ice and extended to within 16–32 km of the coast. Because of the ice, the ship's forward rate of advance was often limited to less than 1 knot the first 6 days of the survey.

Helicopter deployment of ARGOS weather buoys for the Polar Science Center (PSC) of the Applied Physics Laboratory commenced on 23 August and continued at intervals throughout the trip as desired locations were reached or came within helicopter range. Helicopter-supported CTD stations using the APL lightweight CTD profiler were occupied out to 100 km from the ship on parallel tracks to increase coverage and supplement those taken from the slowly moving ship in the heavy ice. Because of the extensive ice cover, attempts to penetrate the ice pack north of 72° were abandoned, and the ship proceeded westward on 24 August.

Hydrographic sections were more successful in the lighter ice west of longitude 145°. Deployment of ARGOS buoys and helicopter CTD stations continued as weather permitted.

One task of the cruise was the location and recovery of a damaged meteorological research buoy from the drifting remains of the ice camp used for the spring 1985 Arctic

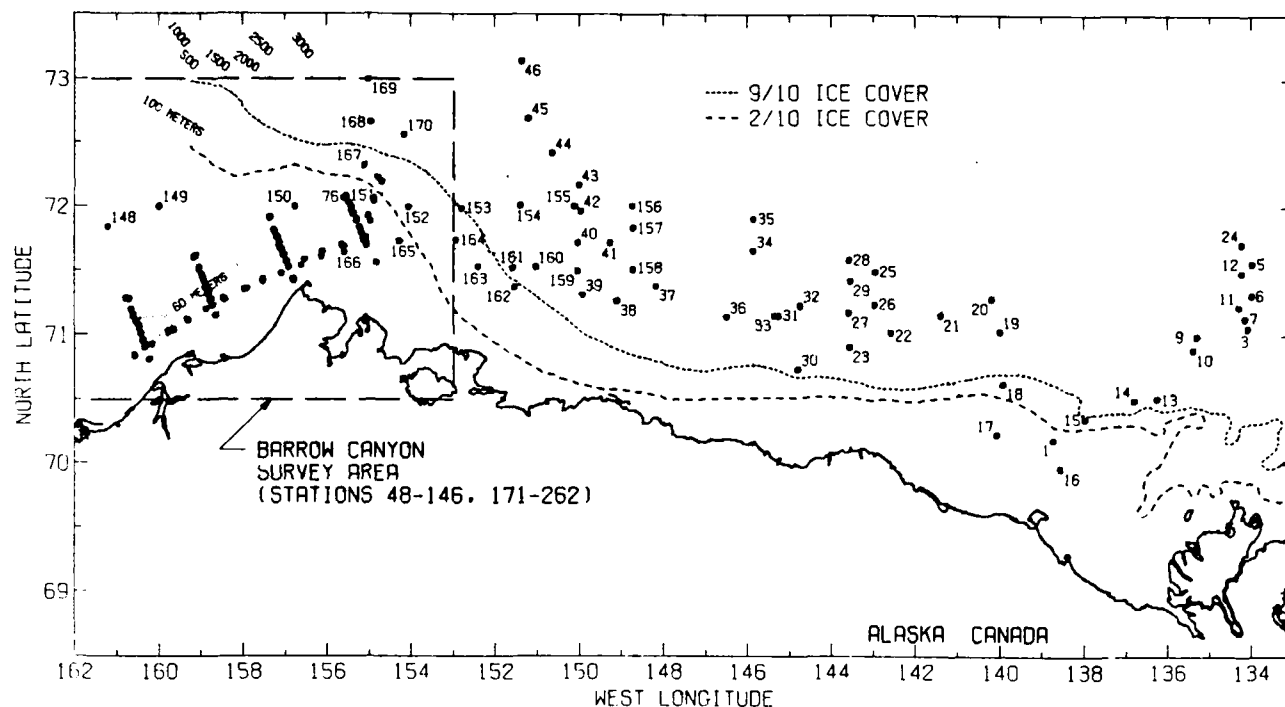


Figure 3. Location of all stations during the Polar Sea cruise in August–September 1985.

Internal Wave Experiment (AIWEX) located near 73°N 151°W . The site was reached at 1600 GMT on 29 August, but fog prevented recovery until 1400 on 30 August. While we were in the area, a 20-min time series of temperature and conductivity was taken at six selected depths to help calibrate a nearby SALARGOS oceanographic buoy.

The Barrow Canyon area was reached on 2 September 1985, and hydrographic sections commenced at 0523. Fifty-one stations were established on five lines, with four lines perpendicular to the coast and one paralleling it. These lines were at the same locations as sections obtained during previous APL studies over the past 15 years, but the stations were more closely spaced. Upon completion of the first Barrow Canyon series, the ship departed for Hanna Shoal near 71°N , 161°W to deploy the last ARGOS buoy.

The next exercise was a series of hydrographic sections perpendicular to the coast east of Pt. Barrow near 149°W to fill in between the earlier lines and to record changes due to the movement of water through the Barrow Canyon during the prior week. Helicopter stations were taken when possible; however, fog interfered.

The Barrow Canyon stations were repeated starting on 12 September at 1232 and finishing on 15 September at 0049. Four of the previous 51 stations were eliminated because of a shortage of time.

Because of deteriorating weather conditions (40-knot winds, snow, and rain), departure of the scientific party from the ship was delayed until 17 September. The scientific party departed from Barrow on the night of 17 September and from Anchorage on 18 September. The scientific equipment was returned to Seattle on the *Polar Sea*, which arrived on 1 October.

Altogether, 150 vertical profiles were made with the Neil Brown CTD unit and 111 with the APL CTD unit. Four APL/PSC ARGOS meteorological buoys were deployed to fill out an existing grid, and the 1985 AIWEX-ARGOS buoy was recovered for analysis of its failure.

III. WEATHER AND POSITION DATA

Weather and position data were provided by the *Polar Sea*. Table I is a copy of the ship's weather records. The position data were obtained from her navigation system, which was updated with NAVSAT fixes every few hours. During the 30 min to 1 h that the ship stopped for each hydrographic station, an average position was obtained and assigned to that station. When both CTD instruments were used, a separate station number was given to each drop even though they were at the same position. The times and positions of all stations are given in Table II.

Table I. Weather records from the Polar Sea.

NAME OF SHIP USCGC Polar Sea				CALL SIGN NRUO		COUNTRY OF REGISTRY USA		MASTER J.T. Howell Capt. USCG		NOAA FORM 72-1A 1-82																																							
MONTH AND YEAR Aug/SEPT				VOYAGE FROM NOSC CRUISE TO				RADIO OFFICER ENS UCHYTIL																																									
BAR COR 0.0		LAST PMO VISIT 85/04/05		PRINCIPAL OBSERVER MSTC ALLES		OBSERVER MST1 ROSE MST2 MICHELS MST3 GALIK/ROSS																																											
Day of Month	Time of Observation (GMT)	POSITION OF SHIP		V.S. D.W.	Ship's Course at time of obs.	Ship Speed	Direction Relative to Ship from	Speed	TRUE WIND	TEMPERATURES		PRESSURE		WEATHER		CLOUDS																																	
		Latitude	Longitude							Dry Bulb	Wet Bulb	Sea Level Pressure	3-Hour Pressure Change	Present	Past																																		
1-31	00-23	Degrees and Tenths	Degrees and Tenths	90-270	True	Knots	000-360	Knots	01-36	Sign of Temp (+ or -)	Degrees and Tenths	Sign of DP (+ or -)	Degrees and Tenths	Group Indicator	Amount	Group Indicator	Amount																																
Y Y G G	1 2 3 4	99 L ₃ L ₂ L ₁	0 L ₄ L ₃ L ₂ L ₁	1 2 3 4	h	V	AN	HGT	N	d	d	1	1	5	n	T	T	2	5	n	T	T	4	P	P	P	P	5	a	p	p	p	7	w	w	w	w	8	n	c	c	c	c						
15	04	99	7	05	7	1	4	8	2	4	1	9	3	175	00	255	08	9	07	08	1	0	05	0	03.5	2	0	02	4	0	45	7	5	7	0	13	7	4	3	4	4	8							
15	12	99	7	05	7	1	4	8	0	4	2	5	9	090	00	340	14	8	07	14	1	0	04	7	0	02.9	2	0	01	4	0	05	8	5	7	0	2	0	7					8	7	6	2		
16	00	99	7	05	7	1	4	8	2	4	1	4	9	269	00	085	07	8	35	07	1	0	02	1	0	1.1	2	1	01	4	0	05	0	5	2	0	12	7	6	1	22	8	7	6	2				
16	12	99	7	05	7	1	4	8	2	4	1	3	9	125	00	210	12	8	34	12	1	0	02	0	0	1.0	2	1	01	4	0	13	1	5	2	0	21	7	4	6	4	4	8	8	6				
17	00	99	7	06	7	1	4	8	2	4	1	4	9	011	00	295	07	6	31	07	1	0	03	5	0	01.2	2	1	03	4	0	2	0	6	5	1	0	14	7	0	14	2	8	4	6	3	0		
17	12	99	7	03	7	1	4	5	0	4	2	4	9	098	08	340	07	7	01	03	1	0	00	17	0	00.2	2	1	02	4	0	2	2	1	5	4	0	0	07					8	7	6	0	0	
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19	12	99	7	14	7	1	3	4	0	4	1	3	9	340	01	270	09	8	24	09	1	0	00	12	0	00.2	2	1	02	4	0	2	0	2	5	4	0	00	7	7	0	7	4	8	8	6			
20	00	99	7	15	7	1	3	3	9	4	1	3	9	322	00	290	00	8	25	06	1	0	00	10	0	00.0	2	1	02	4	0	2	1	5	5	4	0	00	7	4	7	4	4	8					
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21	00	99	7	11	7	1	3	4	0	4	1	9	9	190	00	236	11	0	07	11	1	0	00	07	0	00.0	2	1	01	4	0	1	7	4	5	7	0	08	7	4	6	4	1	8					
21	12	99	7	09	7	1	3	5	3	4	2	7	9	260	03	180	12	2	08	15	1	0	00	08	1	00.8	2	1	04	4	0	1	2	4	5	7	0	15	7					8	1	0	7	8	
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23	00	99	7	08	7	1	1	3	9	4	1	9	1	359	07	030	26	9	04	19	1	0	00	10	0	00.5	2	0	00	4	0	1	2	9	5	3	0	17	7	4	5	4	4	8					
23	12	99	7	12	7	1	4	0	1	4	1	9	5	020	00	360	06	9	02	06	1	0	00	00	0	1.0	2	0	03	4	0	1	8	5	5	2	0	11	7	4	5	4	4	8					
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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

GENERAL INSTRUCTIONS

1. Print all entries using a black ballpoint pen.
2. Complete appropriate blocks on the upper left side.
3. Entries in shaded columns are not to be transmitted by radio.
4. Start new sheet at the beginning of each month.
5. Complete all columns; substitute "/" for elements within a group that are not observed. Groups preceded by a number may be omitted if none of the elements in the group are observed.
6. See NWS Observing Handbook No. 1 for complete observing and coding instructions.

SHIP'S NAME AND SPEED		SEA SURFACE TEMPERATURE		WAVES										ICE ACCRETION		ICE		REMARKS Please enter times of beginning and ending of precipitation of any kind, fog (visibility 1/2 nautical mi. or less), and thun- der; also times of windshifts. Enter details of special or unusual phenomena such as frontal passages, water- spouts, change of water color, slicks, oil, etc.	TRANSMISSION DETAILS Please give call sign of radio station to which message was sent, and time sent GMT	OBSERVER'S INITIALS (PRINT)
Check One <input checked="" type="checkbox"/> Bucket <input type="checkbox"/> Intake depth m		SEA WAVES		SWELL				ICE ACCRETION		ICE										
Period Sec	Height Meters	Direction FROM	PREDOMINANT SWELL	SECONDARY SWELL	Thick- ness of ice acc	Rate of ice acc	Indicator for ice group	Concentration of ice	Stage of development	Ice of land origin	Bearing of ice edge	Situation and trend								
222	D ₀ V ₀	0	T ₀ A ₀ T ₀ A ₀	2	P ₀ A ₀ H ₀ A ₀ H ₀	3	P ₀ A ₀ H ₀ A ₀ H ₀	4	P ₀ A ₀ H ₀ A ₀ H ₀	5	P ₀ A ₀ H ₀ A ₀ H ₀	6	I ₀ S ₀ E ₀ S ₀ R ₀	ICE	C, S, B, D, Z					
222	φ φ	0	φ φ φ 4	2		3		4		5		6		ICE	5 8 φ 9 2		gwm			
222	3 1	0	φ φ φ 8	2		3		4		5		6		ICE	5 8 φ 9 2		amr			
222	6 1	0	φ φ φ 9	2		3		4		5		6		ICE	5 8 φ 9 2		amr			
222	φ φ	0	φ φ φ 2	2		3		4		5		6		ICE	5 8 φ 9 2		Bjg			
222	φ φ	0	φ φ φ 7	2		3		4		5		6		ICE	5 8 φ 9 2		gwm			
222	3 2	0	φ φ 2 2	2		3		4		5		6		ICE	2 8 φ 8 φ		amr			
222	3 2	0	φ φ 3 9	2	φ φ φ φ	3		4		5		6		ICE	2 5 φ φ φ		PJR			
222	1 1	0	1 φ 1 φ	2		3		4		5		6		ICE	5 8 φ 9 2		Bjg			
222	φ φ	0	1 φ φ 4	2		3		4		5		6		ICE	5 8 φ 9 5		PJR			
222	8 1	0	1 φ 1 2	2		3		4		5		6		ICE	5 8 φ 9 5		PJR			
222	φ φ	0	1 φ 1 φ	2		3		4		5		6		ICE	5 8 φ 9 5		Bjg			
222	5 1	0	1 φ 1 2	2		3		4		5		6		ICE	5 7 φ 9 4		PJR			
222	φ φ	0	1 φ 1 3	2		3		4		5		6		ICE	5 8 φ 9 5		PJR			
222	5 1	0	1 φ φ 8	2		3		4		5		6		ICE	5 8 φ 9 4		Bjg			
222	2 1	0	1 φ φ 5	2		3		4		5		6		ICE	5 8 φ 9 4		PJR			
222	5 2	0	φ φ 4 5	2		3		4		5		6		ICE	4 5 φ / 3		Bjg			
222	8 1	0	φ φ 1 8	2		3		4		5		6		ICE	6 5 φ / 2		PJR			
222	φ φ	0	1 φ φ 4	2		3		4		5		6		ICE	5 4 φ 9 2	48 1215Z 48 1300Z	Bjg			
222	6 1	0	1 φ 1 1	2		3		4		5		6		ICE	5 6 φ / 3		PJR			
222	6 1	0	1 φ 1 1	2		3		4		5		6		ICE	5 6 φ / 2	48 1400Z	Bjg			
222	5 1	0	1 φ φ 2	2		3		4		5		6		ICE	5 7 φ 9 2		PJR			
222	8 1	0	1 φ φ 4	2		3		4		5		6		ICE	5 6 φ / 2	48 1025Z	Bjg			
222	6 1	0	φ φ φ 1	2		3		4		5		6		ICE	5 8 φ 9 2	Net bulb double checked. 48 0800Z	PJR			
222	5 1	0	1 φ φ 1	2		3		4		5		6		ICE	5 6 φ 9 3	48 1245Z	Bjg			

NOAA Form 72-1

[illegible]

Table I, cont.

SHIP'S WEATHER OBSERVATIONS

(PRINT ALL ENTRIES)



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

GENERAL INSTRUCTIONS

- 1 Print all entries using a black ballpoint pen.
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[illegible]

Table I, cont.

NAME OF SHIP USCGC Polar Sea				CALL SIGN NRUO		COUNTRY OF REGISTRY USA		MASTER J.T. Howell Capt. USCG		NOAA FORM 72-1A (82)																																		
MONTH AND YEAR SEPT 19 85				FROM NOCS		TO		RADIO OFFICER																																				
BAR COR 0.0		LAST PMO VISIT 85/06/05		PRINCIPAL OBSERVER MSTC ALLES		OBSERVER MSTI ROSE		OBSERVER MSTR MICHELS		OBSERVER MSTJ ROSS/GALK																																		
Day of Month	Time of Observation Year-est hour	Wind Indicator	POSITION OF SHIP		Precipitation Data Indicator (4)	Weather Data Indicator (1 or 2)	Height of Lowest Cloud	Ship's Course at time of obs.	Ship Speed	APPARENT WIND		TRUE WIND		TEMPERATURES				PRESSURE		WEATHER		CLOUDS																						
			Latitude	Longitude						Direction Relative to Ship from	Speed	Direction from	Speed	Dry Bulb	Wet Bulb	Dew Point	Sea Level Pressure	1-HOUR PRESSURE CHANGE	Present	PAST	Group Indicator	Amount	Group Indicator	Amount																				
01-31	00-23	01-4	Degrees and Tens	Degrees and Tens						000-360	Knots	01-36	Knots	Sign of Temp. (+ - 0)	Degrees and Tenths	Sign of D.P. (+ - 0)	Degrees	Group Indicator	Millicars and Tenths (thousands fig. omitted)	Group Indicator	Millicars and Tenths (thousands fig. omitted)	00-99	Primary Secondary	Group Indicator	Amount																			
Y Y G G	99	L ₁ L ₂ L ₃	Q ₁ L ₁ L ₂ L ₃	L ₄ L ₅ h V V	ESTIMATED ANEMOMETER AN. HGT.	33	N d d i i	1 s n T T T	2 s n T _g T _g T _g	4 P P P P	5 a p p p	7 w w W W ₂	8 N ₁ C ₁ C ₂ C ₃																															
08	04	99	7 1 6	7 1 4 8 7	4 1	2 9 3	175	03	250	08	8	05	10	1	1	04	8	1	4.9	2	1	06	4	0	1	4	58	02	2	7	4	6	4	2	8	8	6	0						
08	12	99	7 1 5	7 1 5 0 0	4 1	4 4 7	236	00	130	17	8	01	17	1	1	04	0	1	4.3	2	1	06	4	0	03	1	57	01	1	7	0	7	2	8	8	6	0							
09	04	99	7 1 3	7 1 5 1 5	4 2	4 9 7	090	3.5	290	11	8	3	6	1	0	1	0	1	8	1	2.5	2	1	04	4	0	05	6	52	0	1	7			8	8	6	0						
09	12	99	7 1 7	7 1 5 5 5	4 1	3 9 7	256	12	335	12	6	1	5	0	6	1	1	0	1	5	1	2.5	2	1	05	4	0	07	1	57	0	0	5	7	7	8	8	6	0					
10	00	99	7 1 4	7 1 5 6 7	4 1	3 9 7	225	03	250	02	8	0	7	0	4	1	0	0	0	1	1.0	2	1	03	4	0	04	5	58	0	0	5	7	1	6	7	2	8	4	4	2			
10	12	99	7 2 7	7 1 5 5 0	4 2	4 9 7	094	00	300	03	8	0	3	0	3	1	1	0	3	0	3.6	2	1	05	4	0	04	6	54	0	0	0	0	0	0	0	8	8	6	0				
11	00	99	7 2 5	7 1 5 4 2	4 1	4 4 7	036	00	295	05	5	3	3	0	5	1	1	0	4	1	4.5	2	1	06	4	0	05	4	53	0	0	0	4	7	4	8	3	6	7	0				
11	12	99	7 1 4	7 1 5 6 8	4 2	4 9 7	034	07	285	12	6	2	8	1	2	1	0	4	1	2	0	0	2	1	02	4	0	09	1	52	0	1	4	7		8	2	6	1	0				
12	00	99	7 1 8	7 1 5 5 6	4 1	3 9 7	040	14	005	25	8	0	5	1	1	1	0	0	1	0	0	0	2	1	02	4	0	1	15	52	0	0	0	5	7	0	2	7	4	8	6	4	2	8
12	12	99	7 1 6	7 1 5 6 6	4 2	4 9 7	243	13	325	06	3	1	8	1	8	1	0	0	1	0	0	5	2	1	03	4	0	1	1	0	0	0	0	0	0	0	0	8	3	4	4	0		
13	00	99	7 0 8	7 1 6 0 4	4 1	4 9 7	107	23	170	05	7	2	8	0	7	1	0	0	3	0	0	4	2	1	04	4	0	04	7	52	0	1	7	0	1	7	4	8	4	5	3	0		
13	12	99	7 1 3	7 1 5 9 4	4 2	7 9 7	116	06	340	15	7	3	4	1	0	1	1	0	0	1	1.5	2	1	04	4	0	04	3	58	0	0	0	3	7		8	7	0	2	4	0			
14	00	99	7 1 3	7 1 5 7 4	4 2	4 9 7	080	11	315	10	8	3	2	0	8	1	1	0	2	4	3.0	2	1	05	4	0	04	8	53	0	0	0	4	7		8	8	5	0	0				
14	12	99	7 2 1	7 1 5 5 7	4 2	4 9 7	067	05	095	04	8	1	1	0	7	1	1	0	2	1	3.6	2	1	07	4	0	05	4	57	0	0	0	2	1		8	8	5	0	0				
15	00	99	7 1 7	7 1 5 5 4	4 2	4 9 7	135	00	240	13	7	0	2	1	3	1	1	0	2	4	3.5	2	1	07	4	0	09	6	56	0	0	0	9	7		8	6	5	2	0				
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														
		99			4									1																														

NOAA FORM 72-1A (1-82)

Supersedes all editions

Table I, cont.

SHIP'S WEATHER OBSERVATIONS

(PRINT ALL ENTRIES)



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

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SHIP'S NAME AND PORT		SEA SURFACE TEMPERATURE	WAVES										ICE ACCRETION		ICE				REMARKS <small>Please enter times of beginning and ending of precipitation of any kind, fog (visibility 1/2 nautical mi. or less), and thunder; also times of windshifts. Enter details of special or unusual phenomena such as frontal passages, water-spouts, change of water color, slicks, oil, etc.</small>	TRANSMISSION DETAILS <small>Please give call sign of radio station to which message was sent, and time sent GMT</small>	OBSERVER'S INITIALS (PRINT)
Date and Time	Locality	Check One <input checked="" type="checkbox"/> Bucket <input type="checkbox"/> Intake depth m	SEA WAVES		SWELL				Thick-ness of ice acc	Rate of ice acc	Indicator for ice group	ICE									
			Period	Height	DIRECTION FROM	PERIODIC SWELL	SECONDARY SWELL	Concentration of ice				Stage of development	Ice at land origin	Bearing of ice edge	Shrinker and trend						
Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters		
222	D.V.	0	T ₁ T ₂ T ₃ T ₄	2	P ₁ P ₂ H ₁ H ₂	3	1 2 3 4	4	P ₁ P ₂ H ₁ H ₂	5	P ₁ P ₂ H ₁ H ₂	6	I ₁ E ₁ S ₁ R ₁	ICE	c	S	b	D	z		
222	4 L	0	1 4 4 7	2		3		4		5		6		ICE	5	6	4	9	3		PJR
222	6 L	0	4 4 4 2	2		3		4		5		6		ICE	5	6	4	9	3	-38 11 30 Z	AmR
222	4 L	0	1 4 4 5	2		3		4		5		6		ICE	5	8	4	9	2	-58 04 45 Z	PJR
222	6 3	0	4 4 3 5	2		3		4		5		6		ICE						-SE 12 30 Z WIND SHIFT	AmR
222	1 L	0	4 4 6 2	2		3	43	4	4 4 4 4	5		6		ICE							PJR
222	1 L	0	1 4 4 4	2		3		4		5		6		ICE	5	6	4	9	2	-58 12 35 Z	AmR
222	3 L	0	1 4 4 8	2		3		4		5		6	2 4 4 3	ICE	5	9	4	9	5		PJR
222	5 L	0	4 4 6 2	2	4 2 4 1	3		4		5		6		ICE							AmR
222	1 2	0	4 4 1 2	2	4 9 4 4	3		4		5		6		ICE							PJR
222	5 L	0	4 4 5 4	2	4 3 4 1	3		4		5		6		ICE						430 23 4 Z -58 42 40 Z -SE 05 30 Z	AmR
222	5 2	0	4 4 7 1	2	4 5 4 2	3		4		5		6		ICE							PJR
222	1 L	0	4 4 0 2	2	///	3		4		5		6		ICE	2 8 4 8 4						AmR
222	1 2	0	4 4 6 4	2	4 2 4 4	3		4		5		6		ICE	/// 4 8 4						PJR
222	1 2	0	1 4 4 4	2		3		4		5		6		ICE	5 6 4 9 2						AmR
222	3 L	0	4 4 4 6	2	4 3 4 1	3	4 8	4	4 4 4 1	5		6		ICE	2 9 4 4 4					WIND SHIFT	PJR
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							
222	0			2		3		4		5		6		ICE							

Table II. Times and positions of the CTD stations taken during the 1985 cruise.

Station Number	ASL Cast	APL Cast	Julian Day ^a	GMT hhmm	Platform	Latitude	Longitude
1		X	229	2247	Ship	70 11.1	138 44.1
2	X		229	2312	Ship	70 11.1	138 44.1
3	X		230	1849	Ship	71 3.6	134 6.7
4	X		230	1918	Ship	71 3.6	134 6.7
5	X		231	1554	Ship	71 33.9	133 59.5
6	X		232	0945	Ship	71 18.9	134 0.0
7	X		233	0147	Ship	71 8.2	134 9.7
8	X		233	0214	Ship	71 8.2	134 9.7
9	X		233	1223	Ship	70 59.8	135 19.2
10	X		233	2145	Ship	70 53.8	135 24.1
11		X	233	2230	Helo	71 13.5	134 19.0
12		X	233	2300	Helo	71 29.5	134 15.0
13	X		234	0444	Ship	70 31.1	136 16.1
14	X		234	0820	Ship	70 30.1	136 48.7
15	X		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0
19	X		235	0240	Ship	71 1.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0
21	X		236	0437	Ship	71 9.0	141 24.6
22	X		236	1242	Ship	71 1.2	142 36.4
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	Helo	71 42.9	134 15.0
25		X	236	1800	Helo	71 29.5	142 58.0
26		X	236	1845	Helo	71 14.0	142 59.0
27		X	236	2257	Helo	71 10.2	143 36.0
28		X	236	2342	Helo	71 35.0	143 35.3
29		X	237	0015	Helo	71 25.0	143 34.0
30		X	237	0613	Ship	70 44.4	144 48.8
31		X	237	1043	Ship	71 8.7	145 15.9
32		X	237	1804	Helo	71 13.3	144 45.0
33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	Helo	71 39.2	145 52.3
35		X	237	2253	Helo	71 54.2	145 52.0
36	X		238	0425	Ship	71 8.1	146 29.8
37		X	240	0014	Helo	71 22.4	148 11.0
38	X		240	0509	Ship	71 15.5	149 6.7
39	X		240	1001	Ship	71 18.6	149 56.1
40	X		240	1803	Ship	71 42.9	150 2.4
41		X	240	1816	Helo	71 42.9	149 16.5
42	X		241	0144	Ship	71 57.9	149 58.5
43	X		241	0548	Ship	72 9.8	150 1.7
44	X		241	1101	Ship	72 24.9	150 39.9
45	X		241	1636	Ship	72 41.5	151 13.9
46	X		242	0200	Ship	73 8.6	151 23.0
47		X	245	0524	Ship	70 50.7	160 34.9
48	X						
49	X		245	0626	Ship	70 55.8	160 10.8
50		X					
51		X	245	0819	Ship	71 2.2	159 39.1
52	X						

^aJulian Day 244 was 1 September

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
53		X	245	0922	Ship	71 7.0	159 19.4
54	X						
55		X	245	1033	Ship	71 11.8	158 52.6
56	X						
57	X		245	1135	Ship	71 16.9	158 28.2
58		X					
59	X		245	1300	Ship	71 21.4	157 55.2
60		X					
61	X		245	1409	Ship	71 24.9	157 31.9
62		X					
63	X		245	1530	Ship	71 28.7	157 5.3
64		X					
65	X		245	1659	Ship	71 32.5	156 36.9
66		X					
67	X		245	1831	Ship	71 36.7	156 8.3
68		X					
69	X		245	2000	Ship	71 41.3	155 35.9
70		X					
71	X		245	2121	Ship	71 44.4	155 8.5
72	X		245	2351	Ship	71 55.6	155 1.3
73	X		246	0109	Ship	72 3.9	154 53.9
74	X		246	0254	Ship	72 13.5	154 48.1
75		X	246	0531	Ship	72 4.1	155 36.6
76	X						
77	X		246	0650	Ship	72 1.9	155 29.6
78		X					
79	X		246	0813	Ship	71 58.1	155 26.6
80		X					
81	X		246	0920	Ship	71 56.7	155 23.4
82		X					
83	X		246	1044	Ship	71 53.5	155 18.8
84		X					
85	X		246	1150	Ship	71 50.3	155 14.7
86		X					
87	X		246	1251	Ship	71 47.6	155 11.1
88		X					
89	X		246	1400	Ship	71 45.4	155 4.9
90		X					
91	X		246	1502	Ship	71 41.8	155 3.8
92		X					
92a	X		246	1640	Ship	71 33.7	154 49.3
93	X		247	0048	Ship	71 25.3	156 47.0
94		X					
95	X		247	0202	Ship	71 31.8	156 55.2
96		X					
97	X		247	0258	Ship	71 34.4	156 58.4
99		X					
100	X		247	0344	Ship	71 37.7	157 3.3
101		X					
102	X		247	0430	Ship	71 40.2	157 6.4
103		X					
104	X		247	0512	Ship	71 43.1	157 8.0
105		X					

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
106	X		247	0554	Ship	71 45.9	157 12.4
107		X					
108	X		247	0636	Ship	71 48.9	157 16.4
109		X					
110	X		247	0727	Ship	71 54.7	157 22.6
111		X					
112	X		247	1034	Ship	71 36.2	159 9.9
113		X					
114	X		247	1135	Ship	71 30.5	159 3.1
115		X					
116	X		247	1221	Ship	71 27.1	158 57.9
117		X					
118	X		247	1303	Ship	71 25.1	158 55.9
119		X					
120	X		247	1343	Ship	71 22.2	158 53.9
121		X					
122	X		247	1438	Ship	71 18.8	158 49.5
123		X					
124	X		247	1521	Ship	71 16.2	158 47.0
125		X					
126	X		247	1627	Ship	71 13.6	158 43.1
127		X					
128	X		247	1726	Ship	71 9.0	158 38.2
129		X					
130	X		247	2140	Ship	70 49.2	160 13.7
131		X					
132	X		247	2236	Ship	70 55.4	160 18.9
133		X					
134	X		247	2313	Ship	70 57.5	160 24.3
135		X					
136	X		248	0012	Ship	71 0.6	160 27.1
137		X					
138	X		248	0054	Ship	71 3.2	160 29.5
139		X					
140	X		248	0137	Ship	71 5.9	160 32.7
141		X					
142	X		248	0244	Ship	71 8.9	160 36.5
143		X					
144	X		248	0345	Ship	71 11.6	160 39.8
145		X					
146	X		248	0541	Ship	71 17.0	160 47.7
147		X					
148	X		248	1848	Ship	71 50.5	161 13.5
149	X		249	2338	Ship	72 0.0	160 0.0
150	X		249	0429	Ship	72 0.0	156 45.7
151	X		249	0648	Ship	72 0.0	155 25.5
152	X		249	0904	Ship	71 59.8	154 4.6
153	X		249	1158	Ship	71 59.2	152 48.5
154	X		249	1653	Ship	72 0.4	151 24.9
155	X		249	2341	Ship	72 0.1	150 7.3
156	X		250	0731	Ship	72 0.1	148 44.6
157	X		250	1840	Ship	71 50.0	148 43.5
158	X		251	0149	Ship	71 30.3	148 43.7

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude		Longitude	
159		X	251	1140	Ship	71	29.6	150	2.7
160	X		251	1728	Ship	71	31.6	151	2.5
161	X		251	2036	Ship	71	31.2	151	35.3
162	X		252	0018	Ship	71	22.2	151	32.5
163	X		252	0252	Ship	71	31.7	152	25.2
164	X		252	0540	Ship	71	44.1	152	57.0
165	X		252	0952	Ship	71	43.7	154	17.3
166	X		252	1213	Ship	71	38.6	155	35.3
167	X		253	0633	Ship	72	19.4	155	6.6
168	X		253	1122	Ship	72	39.8	154	58.0
169	X		253	1648	Ship	72	59.9	155	1.4
170	X		253	2331	Ship	72	33.8	154	10.6
171	X		255	0233	Ship	72	11.6	154	43.0
172	X		255	0443	Ship	72	2.6	154	53.6
173	X		255	0622	Ship	71	53.1	154	58.5
174		X	255	0829	Ship	71	42.0	155	39.7
175	X								
176	X		255	0948	Ship	71	38.9	156	6.6
177		X							
178		X	255	1130	Ship	71	35.2	156	32.5
179	X								
180		X	255	1350	Ship	71	25.7	157	31.0
181	X								
182	X		255	1504	Ship	71	21.2	157	57.8
183		X							
184	X		255	1623	Ship	71	16.3	158	26.0
185		X							
186	X		255	1852	Ship	71	6.5	159	17.9
187		X							
188	X		255	2026	Ship	71	1.3	159	47.3
189		X							
190	X		255	2232	Ship	70	51.0	160	35.6
191		X							
192		X	256	0205	Ship	70	49.0	160	14.3
193	X								
194		X	256	0309	Ship	70	54.6	160	20.7
195	X								
196	X		256	0347	Ship	70	57.7	160	23.2
197		X							
198	X		256	0421	Ship	71	0.5	160	26.8
199		X							
200	X		256	0455	Ship	71	4.1	160	28.2
201		X							
202	X		256	0527	Ship	71	6.1	160	33.8
204	X		256	0559	Ship	71	8.9	160	37.1
205		X							
206	X		256	0630	Ship	71	11.6	160	40.1
207		X							
208	X		256	0713	Helo	71	16.7	160	42.8
209		X							
210	X		256	1447	Helo	71	36.9	159	7.3
211		X							

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
212	X		256	1555	Ship	71 31.5	159 2.2
213		X					
214	X		256	1647	Ship	71 28.1	158 59.5
215		X					
216	X		256	1723	Ship	71 25.1	158 56.2
217		X					
218	X		256	1803	Ship	71 22.3	158 52.9
219		X					
220	X		256	1838	Ship	71 19.5	158 50.3
221		X					
222	X		256	1922	Ship	71 16.5	158 45.2
223		X					
224	X		256	2017	Ship	71 13.7	158 43.8
225		X					
226	X		256	2131	Ship	71 8.8	158 38.2
227		X					
228	X		257	0135	Ship	71 26.0	156 49.0
229		X					
230	X		257	0238	Ship	71 31.6	156 55.1
231		X					
232	X		257	0339	Ship	71 34.3	156 57.7
233		X					
234	X		257	0426	Ship	71 37.1	157 1.7
235		X					
236	X		257	0504	Ship	71 39.9	157 4.6
237		X					
238		X	257	0549	Ship	71 41.6	157 9.2
239	X						
240	X		257	0620	Ship	71 45.4	157 10.9
241		X					
242	X		257	0659	Ship	71 48.2	157 14.8
243		X					
244	X		257	0756	Ship	71 55.0	157 21.5
245		X					
246	X		257	1536	Ship	72 5.0	155 32.4
247		X					
248	X		257	1704	Ship	71 59.7	155 25.3
249		X					
250	X		257	1802	Ship	71 56.8	155 21.8
251		X					
252	X		257	1855	Ship	71 54.0	155 17.7
253		X					
254	X		257	2016	Ship	71 50.2	155 13.3
255		X					
256	X		257	2109	Ship	71 48.5	155 11.6
257		X					
258	X		257	2210	Ship	71 45.6	155 8.2
259		X					
260	X		257	2313	Ship	71 42.8	155 4.5
261		X					
262	X		258	0046	Ship	71 33.7	154 49.9
263		X					

IV. SATELLITE IMAGERY

A. Ice Coverage

The satellite images obtained from the Geophysical Institute, University of Alaska, before the cruise were extremely helpful, resulting in several modifications to the ship's track to avoid heavy ice.

The NOAA and LANDSAT images in the visible band gave some information on the location of the ice, but unfortunately clouds often obscured the view. The LANDSAT image reproduced in Figure 4 shows a view off Pt. Barrow on 4 August when the ice was close to shore. A NOAA image taken on 20 August (Figure 5) shows the ice has moved northwestward. Notice the ridge of older ice, which appears white in both images. During the 16-day interval between the two photographs, the ridge has moved westward, and the ice floe has broken up near the edge.

In Figure 5, there appears to be a movement of ice toward the coast near Wainwright. As this ice nears the coast, it is swept along in the Alaskan Coastal Current. This recirculation was observed in 1971 and 1972, when occupied ice camps were swept into the coastal current. A view of the ice on 10 September off Harrison Bay is shown in Figure 6. The edge of the pack is made up of large, separated floes intermingled with small fragments.

Figure 7 shows conditions off the coast from Pt. Barrow to Barter Island on 18 September. Even though much of the area is obscured by haze, it can be seen that the ice floes near the edge of the pack are more widely separated.

B. Infrared Temperatures

Some NOAA images in the infrared frequencies were enhanced to obtain details at temperatures of interest. Figure 8 shows a NOAA image for 5 August in which the temperatures from -2 to $+8^{\circ}\text{C}$ have been enhanced so that each degree corresponds to a small shift in the dot density of the gray scale. It is difficult to identify individual temperatures, but the scale varies from white for the ice, which is below -2°C , to black for the open water near shore, which is at about 8°C . The land is warmer than the enhancement region and thus shows as white. The path of the coastal current past Pt. Barrow is clearly shown as a plume that ends in eddies and mixing, with a branch at right angles that follows the edge of the land.

Figure 9 shows a second enhancement for the same data as Figure 8. In this enhancement, each 1° change in temperature is shown by a contrasting shade on the gray scale, but the shades do not necessarily become progressively darker. The figure shows a temperature change from 0°C for open water (white) to 4° (black) and on to warmer temperatures (using white again and gradually darkening shades) up to the coastal current maximum of 6 or 7°C .



Figure 4. Ice conditions off Pt. Barrow on 4 August as seen in a LANDSAT image.

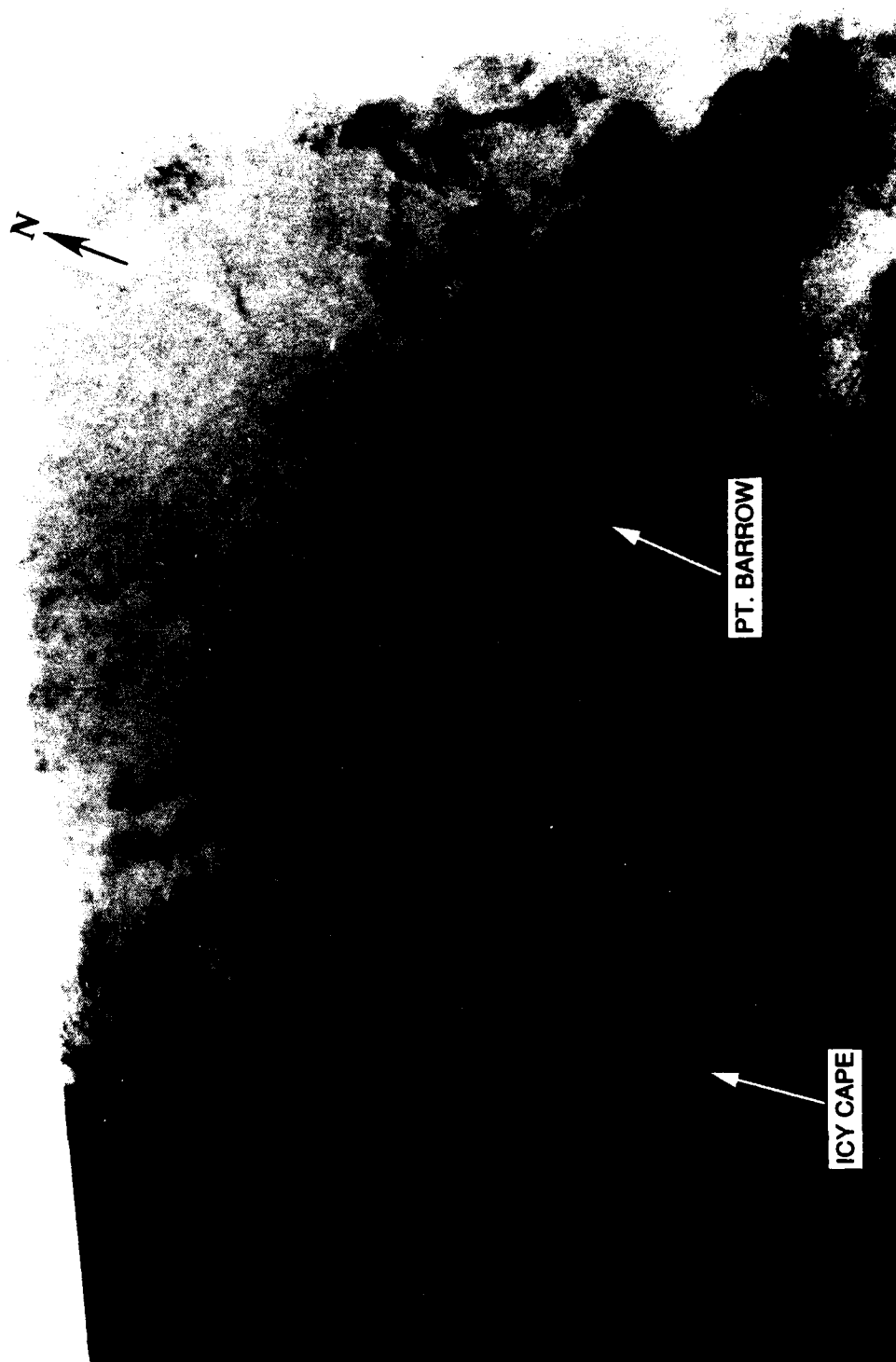


Figure 5. Ice conditions off the coast on 20 August as seen in a NOAA satellite image.



Figure 6. Ice conditions off Harrison Bay on 10 September as seen in a LANDSAT image.

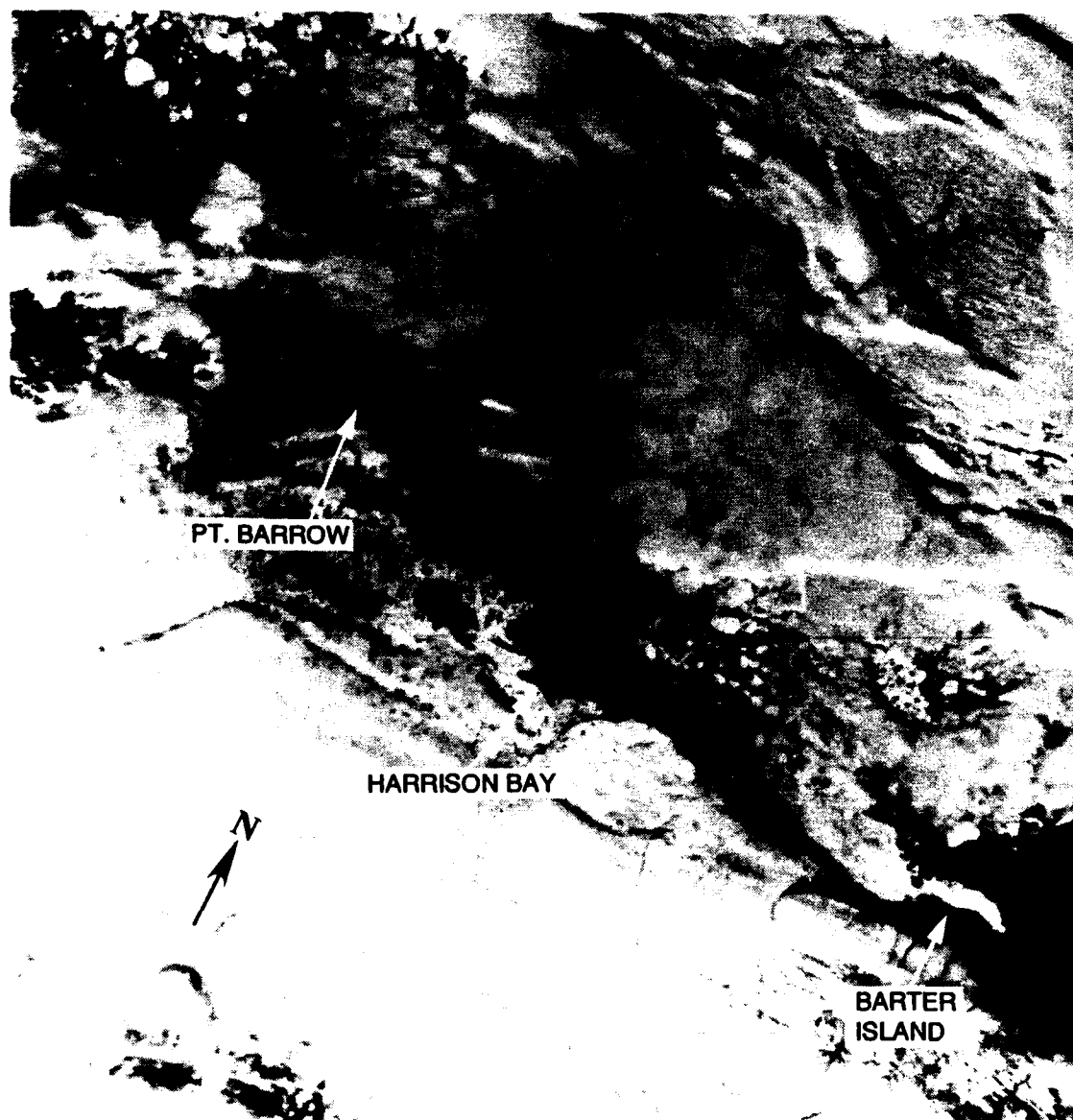


Figure 7. Ice conditions off the coast from Pt. Barrow to Barter Island on 18 September as seen in a NOAA satellite image.

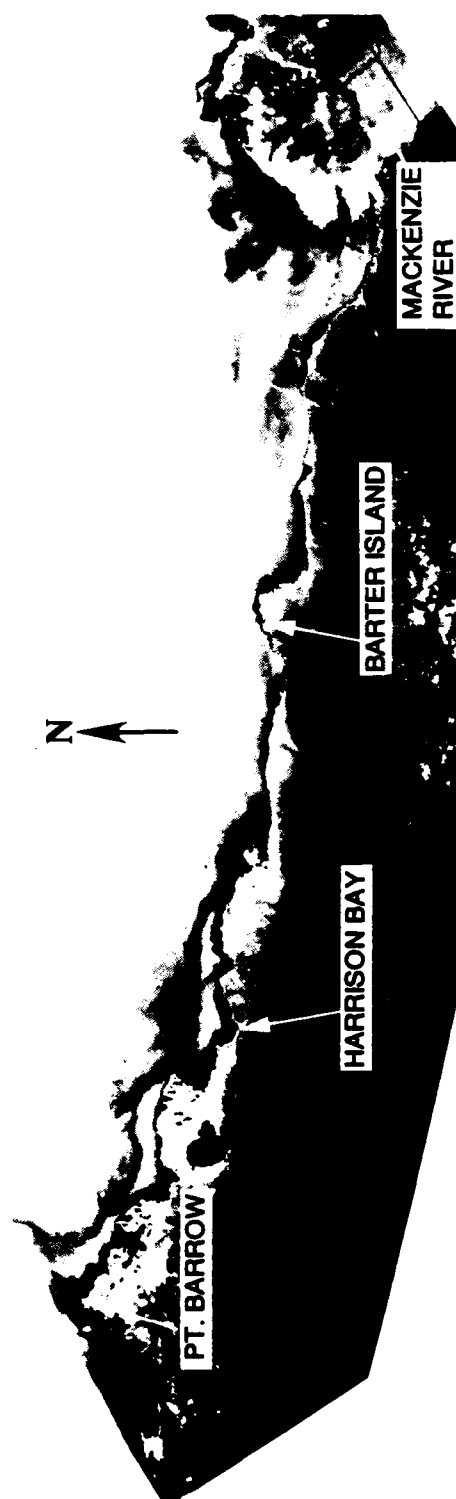


Figure 8. An enhanced NOAA IR image on 5 August that shows by gray scale the transition from white for the ice below -2°C to black at 8°C for the warm open water along the shore.

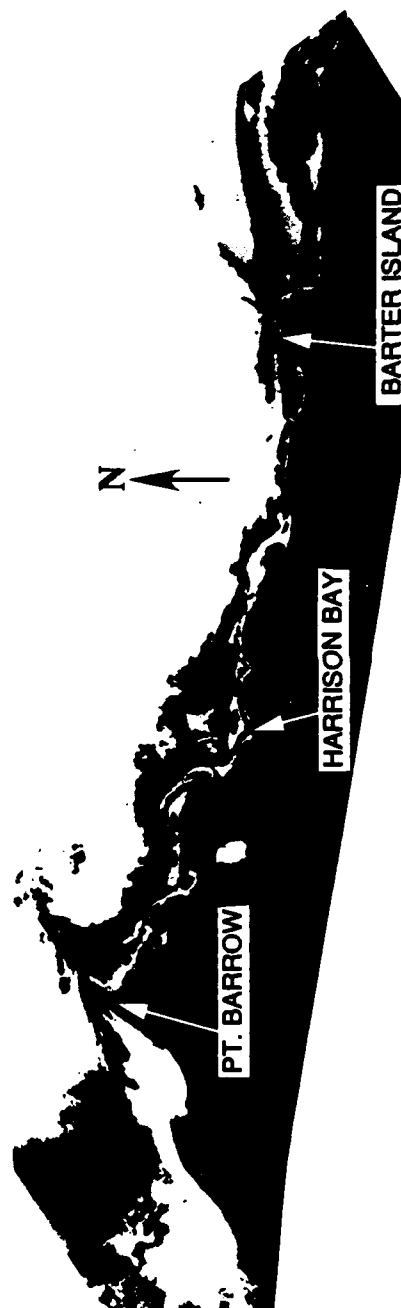


Figure 9. A NOAA satellite image on 5 August that shows an enhanced IR for $0-4^{\circ}\text{C}$. Beyond the black at 4°C there is another white and some successively darker grays that indicate higher temperatures.

The most valuable enhancement was for 0 to 4°C on 25 August (Figure 10). Both the open water at 0°C and the core of 4°C water off Pt. Barrow show up as black. Between these black areas is a series of 1° increments — shown as medium gray, dark gray, and light gray — representing temperatures of 1, 2, and 3°C. The core of 4°C water off Pt. Barrow is followed by white and light grays, indicating temperatures above 4°C.

The image gives the impression that the warm coastal current continues past Pt. Barrow for about 100 miles before it mixes or disappears beneath the ice (see Figure 16 in next section). Only a small amount turns the corner and follows the coast eastward. This branch may extend to Cape Halkett; the warm areas shown farther east are probably due to warming from sunlight in the shallows. This warm surface water shown in the satellite image is closer to the coast than the ship's CTD stations, and thus the image gives added information on the extent of the intrusion.

The warm plume with a core of about 6°C from the Mackenzie River outflow is plainly visible in the satellite IR images. Judging from the extent of water $>-2^{\circ}\text{C}$ in Figure 8 for 5 August, it affected an area 185 km wide that extended about 130 km seaward. Another enhancement of the Mackenzie River outflow is shown in Figure 11. The temperatures represented are not accurately known, but the pattern is helpful when compared with Figure 8.

Some details of the temperature pattern can be seen in Figure 12, an enhancement for 5 August of the area off the coast from Pt. Hope to Pt. Barrow. Going from coldest to warmest, the temperature gradations begin with black in the open sea, representing $<0^{\circ}\text{C}$, then white, at about 1°C, then to several contrasting grays, and back to black again, representing about 5°C. A second white near Pt. Franklin and along the coast south of Wainwright, representing temperatures $>5^{\circ}\text{C}$, is followed by darker shades representing even higher temperatures off Pt. Hope. There are two bands of clouds, which can be identified over the land and which have to be ignored. The image shows that a large portion of the flow is northward off Pt. Hope in addition to the flow close along the coast toward Pt. Barrow.

Figure 13 shows the same area, with a different enhancement, for 17 August, a day with no cloud interference. The elongated stream past Pt. Barrow indicates how far the warm water is carried before it mixes or encounters the ice. The streamer ends at 149°W, which is inside the reported ice boundary (see Figure 15 in next section). As will be shown in Section XI, this agrees with the extent of the warm coastal current indicated by the oceanographic measurements.

The status of the coastal current on 5 September is shown by the two enhancements in Figure 14. As the northward flow passes Pt. Hope, it appears to divide into two branches, one to the north and the other along the coast. The band along the coast is at 6°C, whereas the large extension to the north is at 5°C.

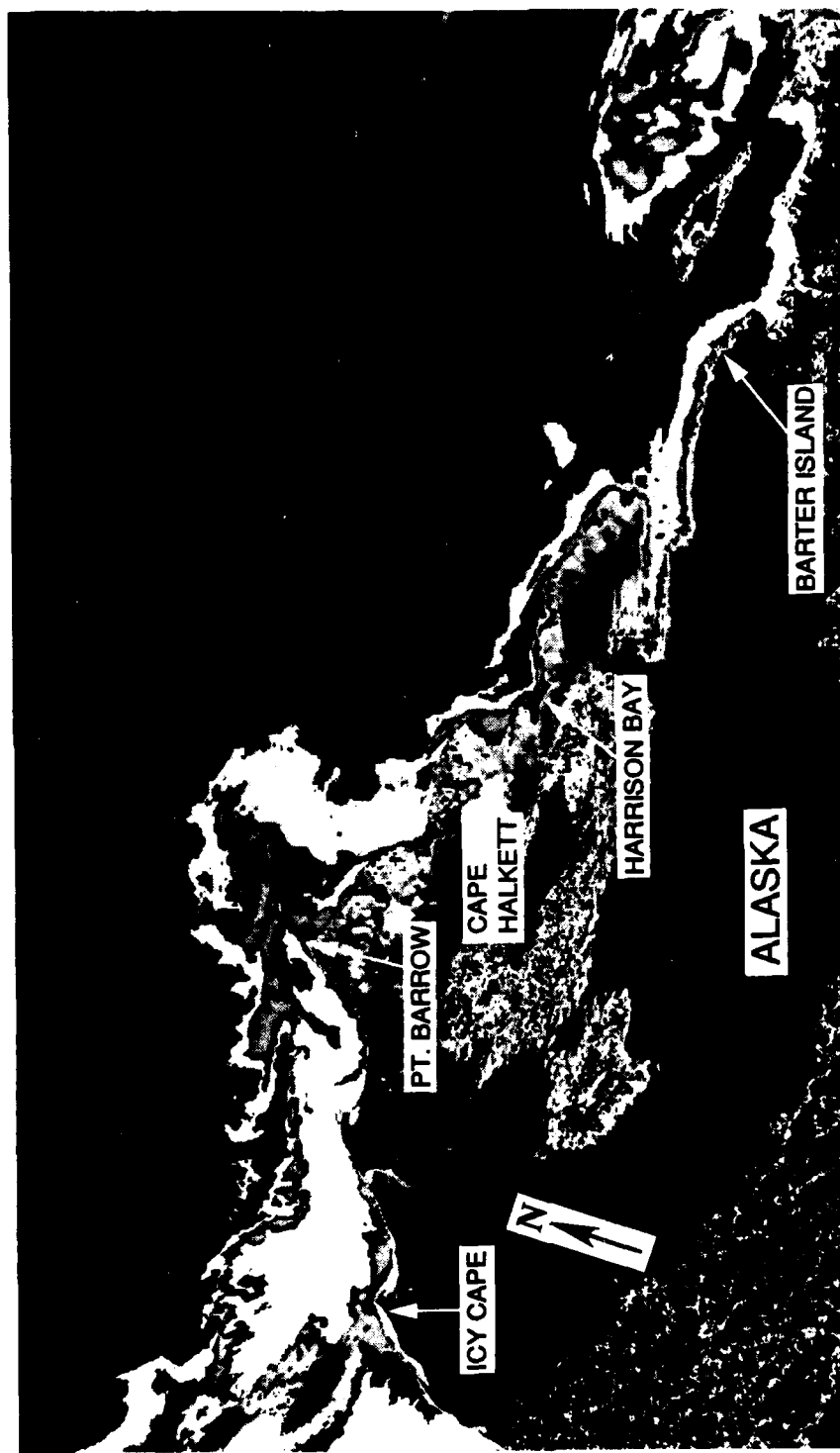


Figure 10. A NOAA satellite image for 25 August with a $0-4^{\circ}$ IR enhancement. Contrasting gray scales were used to show 1° temperature gradations from open water at 0°C to a black core at 4°C and some white and gray for higher temperatures.

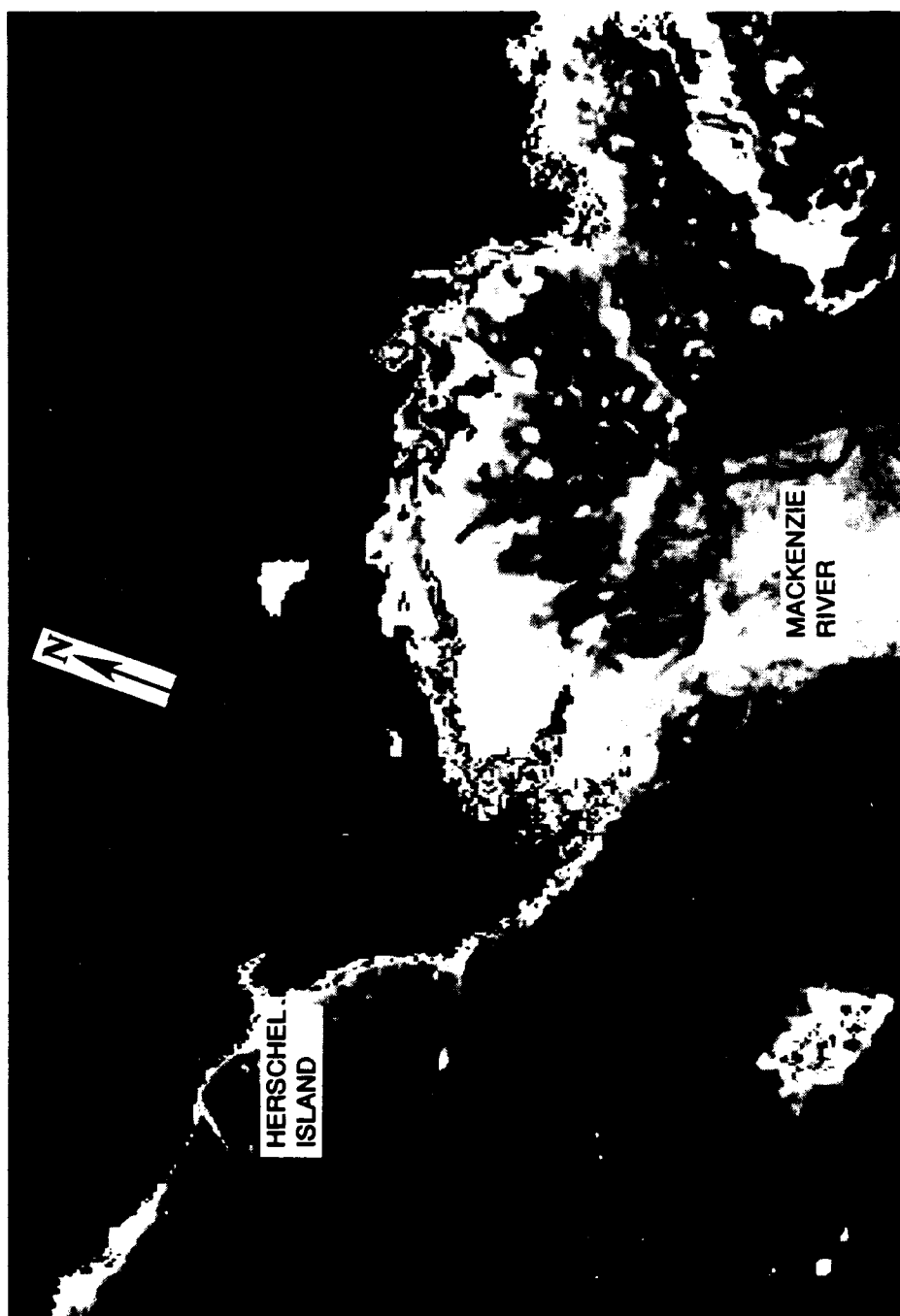


Figure 11. An enlarged enhanced image of the Mackenzie River outflow on 5 August for comparison with Figure 8.

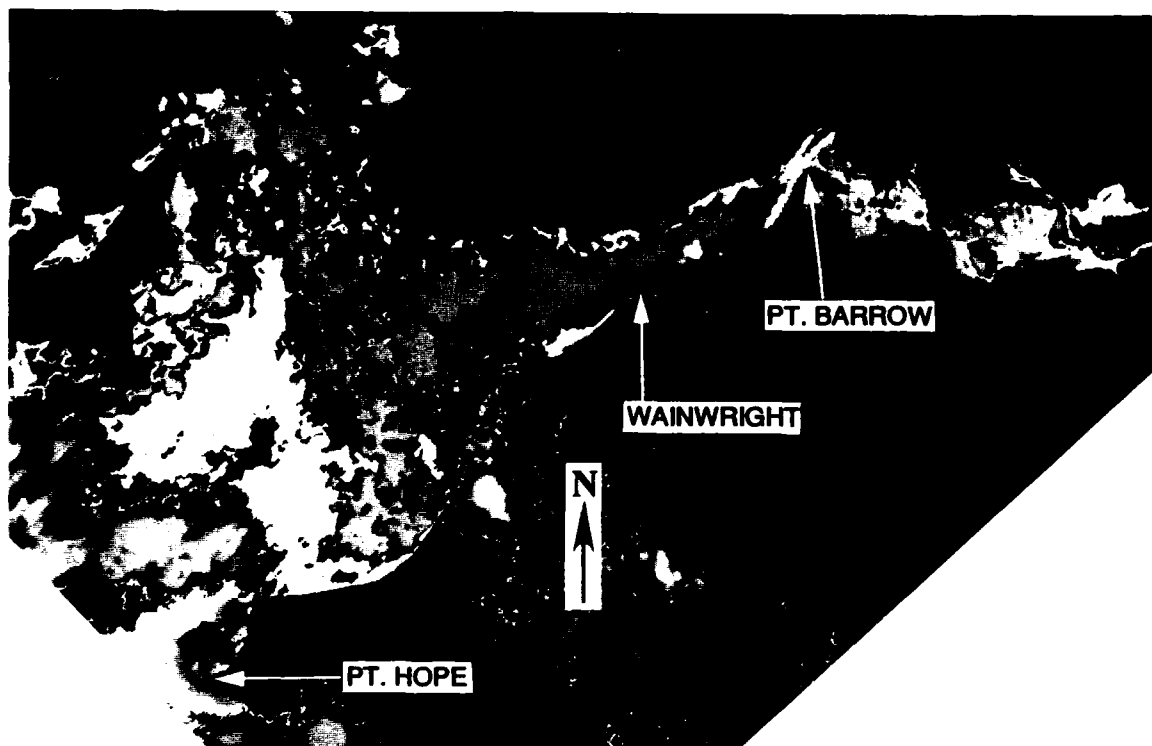


Figure 12. An enhanced image for the southern Chukchi Sea on 5 August showing the pattern of the northerly current past Pt. Hope.

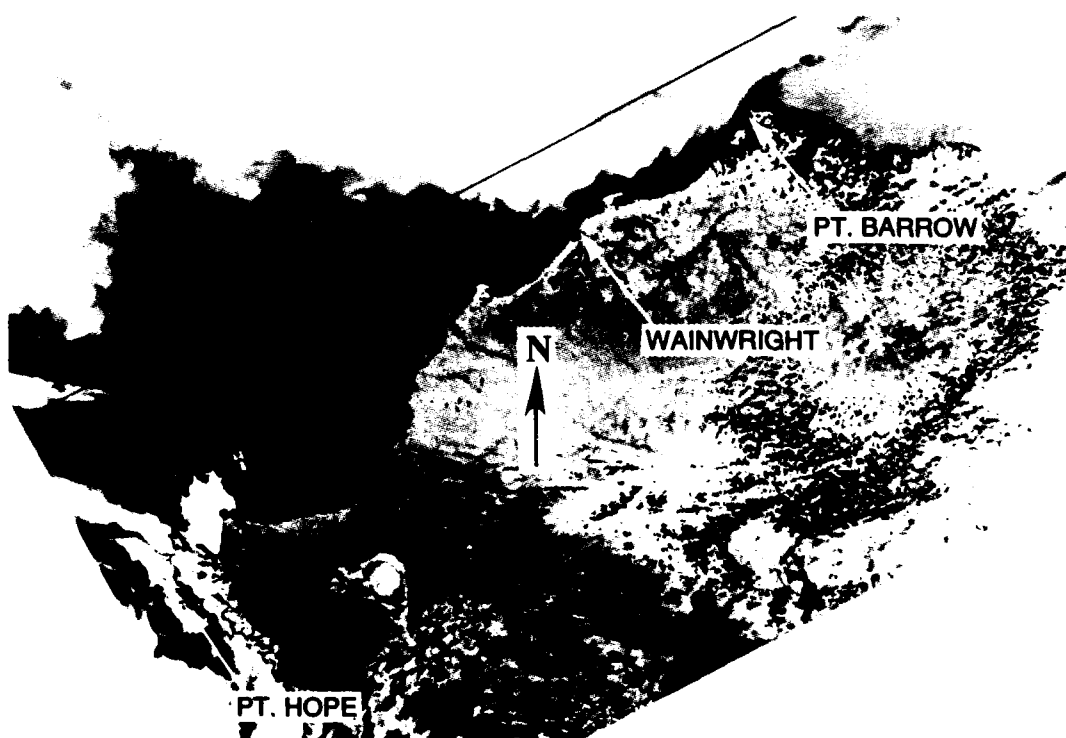


Figure 13. Another enhancement for 17 August showing the pattern of the northerly current past Pt. Hope.

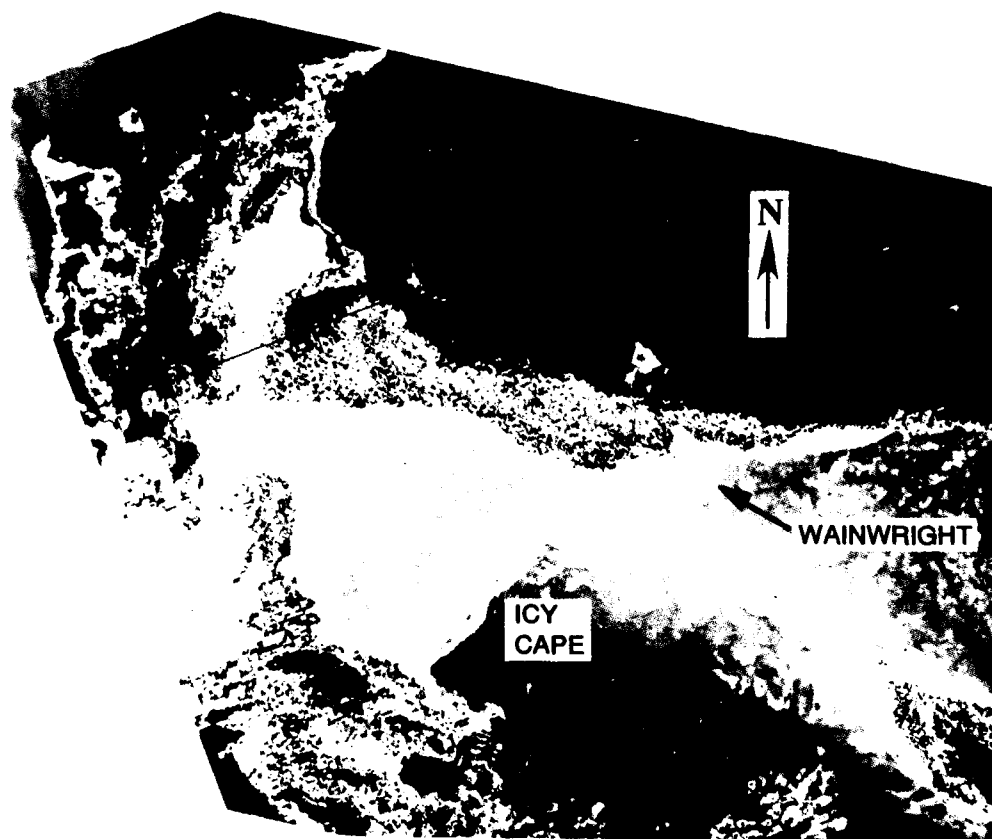
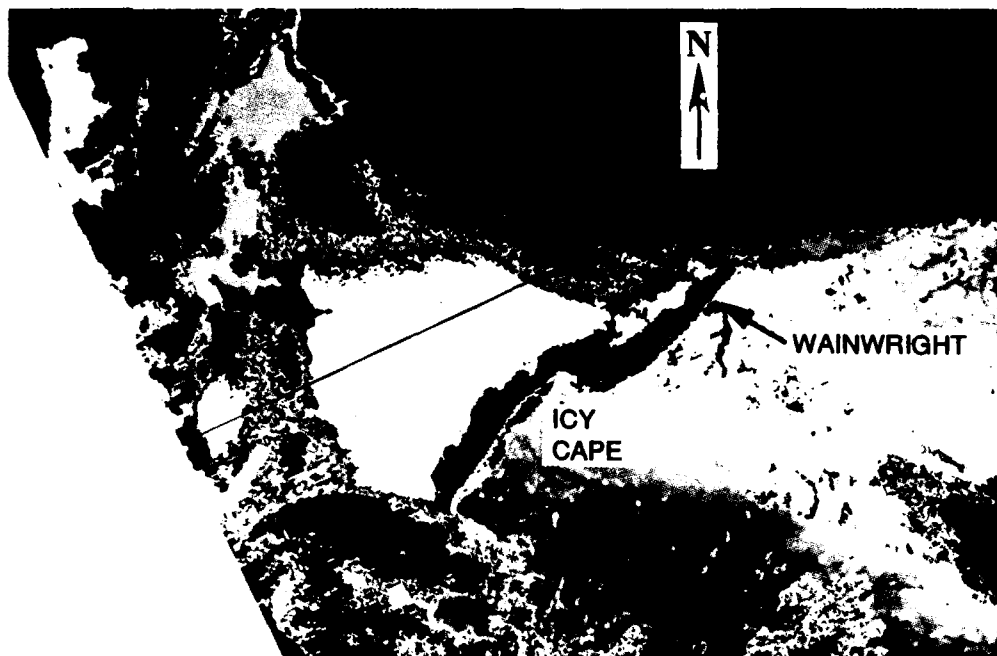


Figure 14. Two enhancements for 5 September showing the spread of the coastal current north of Pt. Hope.

V. ICE CONDITIONS

Ice reports were received from Environment Canada, Ice Control, Ottawa, once a day by radio facsimile on the *Polar Sea*. These consisted of a plot of the 2/10 and the 9/10 coverage lines. Although reports were obtained each day, some were faulty and some showed no change. We have selected as representative the coverage charts for 18 and 27 August and 3, 9, and 13 September and plotted the 2/10 and 9/10 lines in Figures 15–19 for the five days. The ice cover near the time of each of the two surveys of the Barrow Canyon area is shown in Figures 20 and 21. The changes during the 27 day period are shown in Figures 22 and 23, in which we have plotted each line for all 5 days on one graph. The ice is receding in both areas where a warm intrusion occurs. Some westerly movement of the ice is evident, which helps to open up large areas west of Pt. Barrow and west of the Mackenzie River. The winds reported by the ship (Section III) do not seem sufficiently easterly to produce this effect. The movement may be more a result of the Beaufort Gyre.

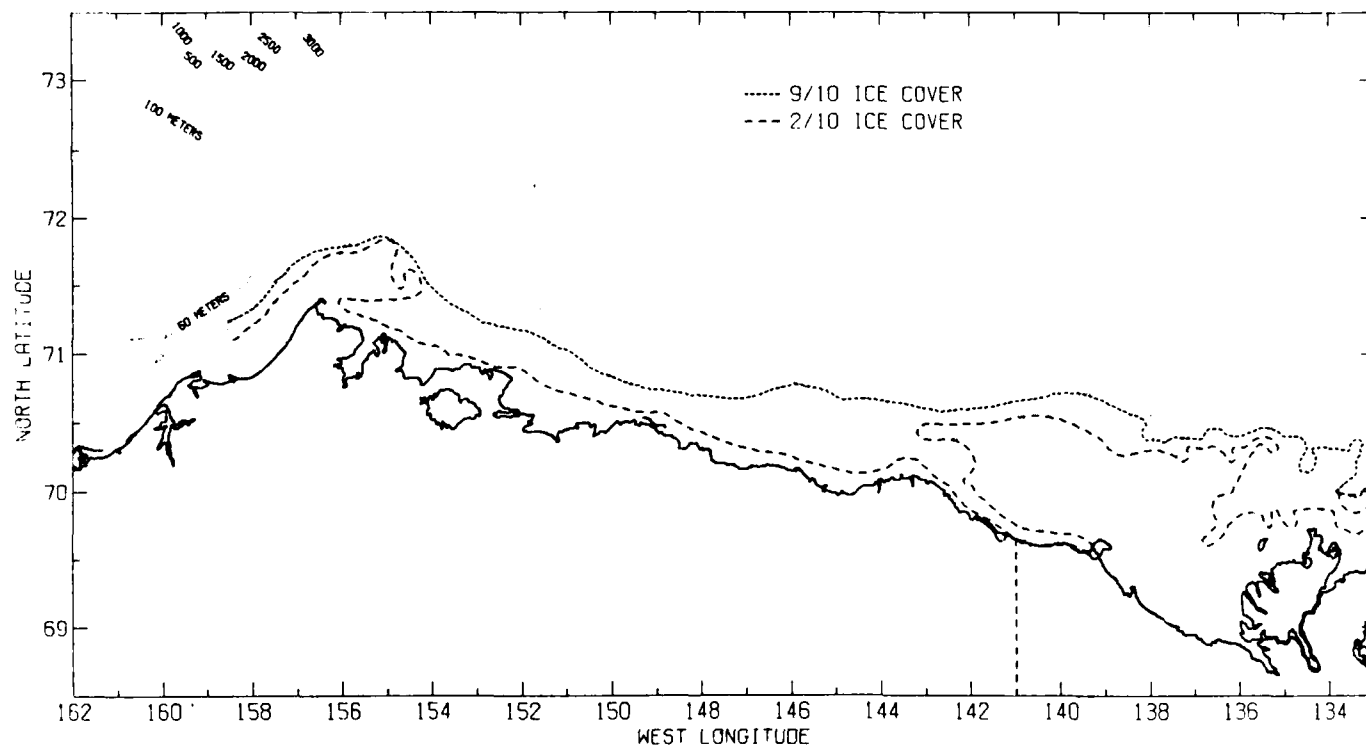


Figure 15. Ice cover reported for 18 August by Environment Canada.

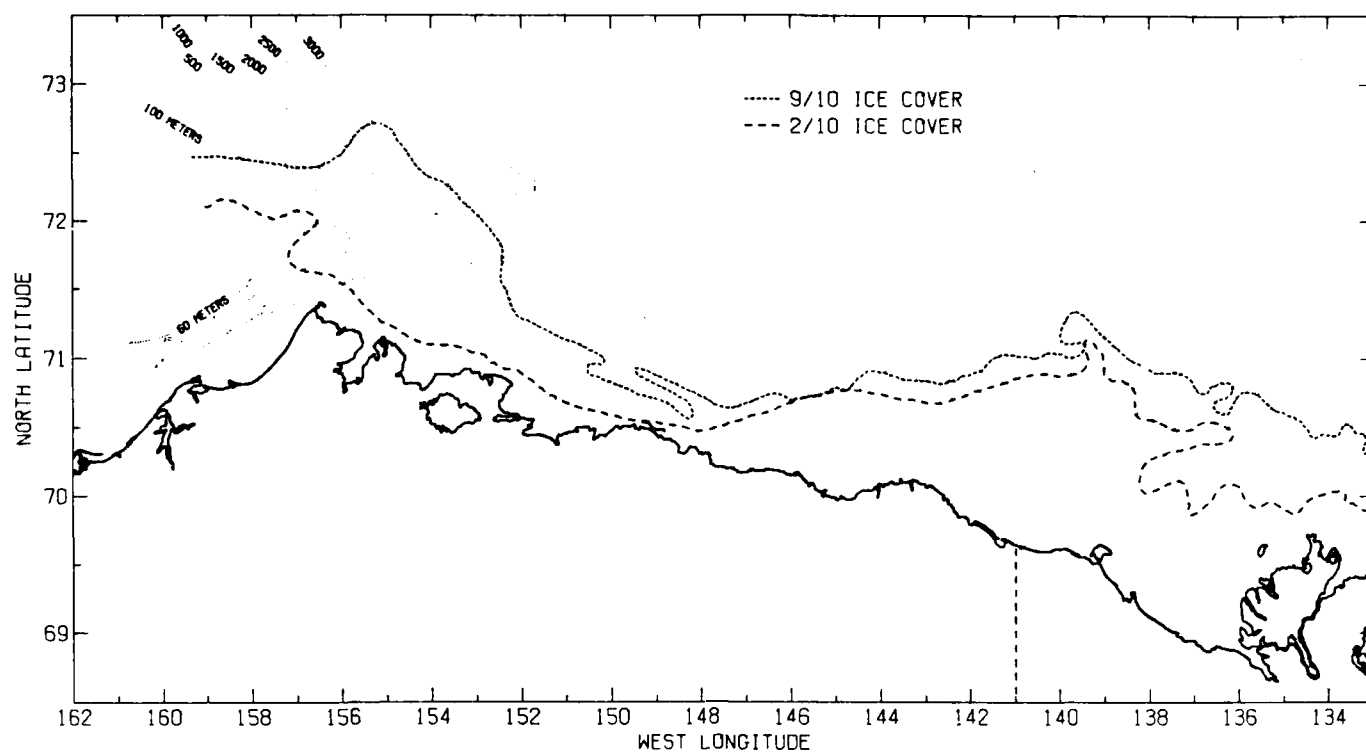


Figure 16. Ice cover reported for 27 August by Environment Canada.

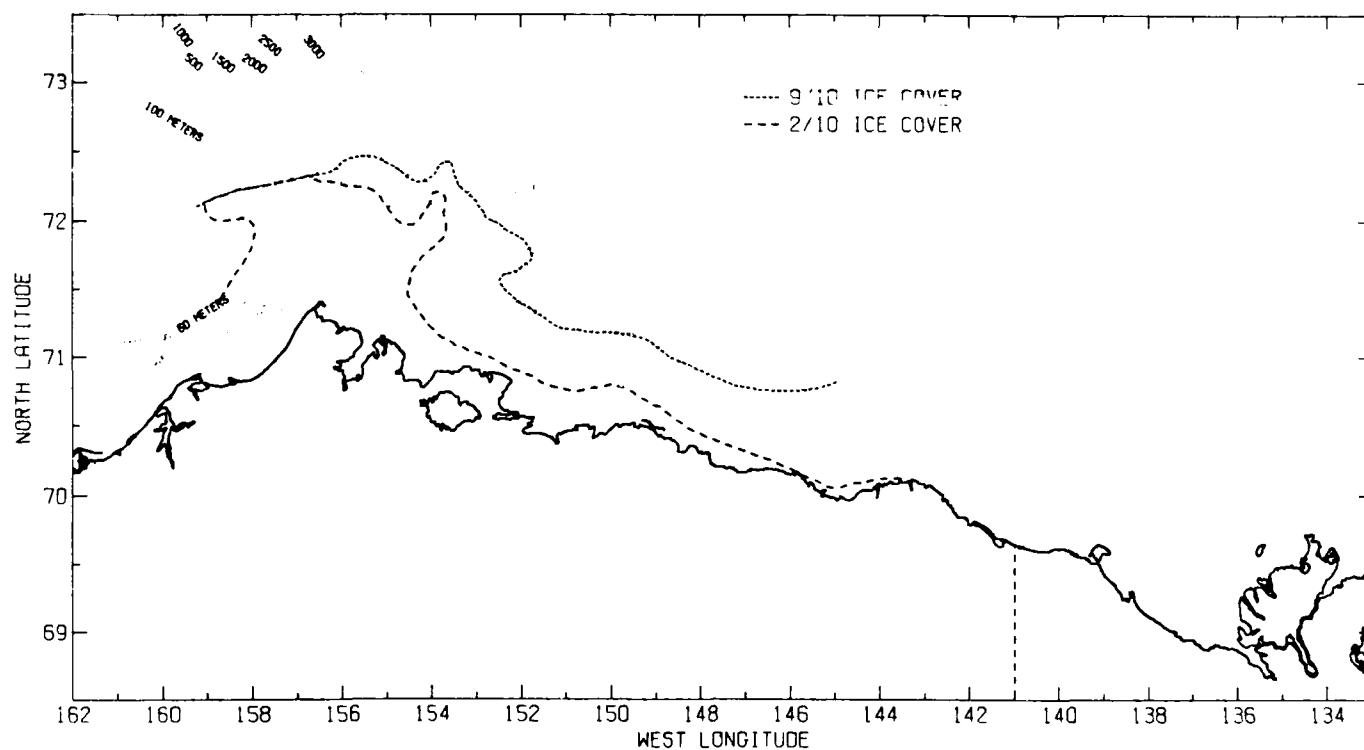


Figure 17. Ice cover reported for 3 September by Environment Canada.

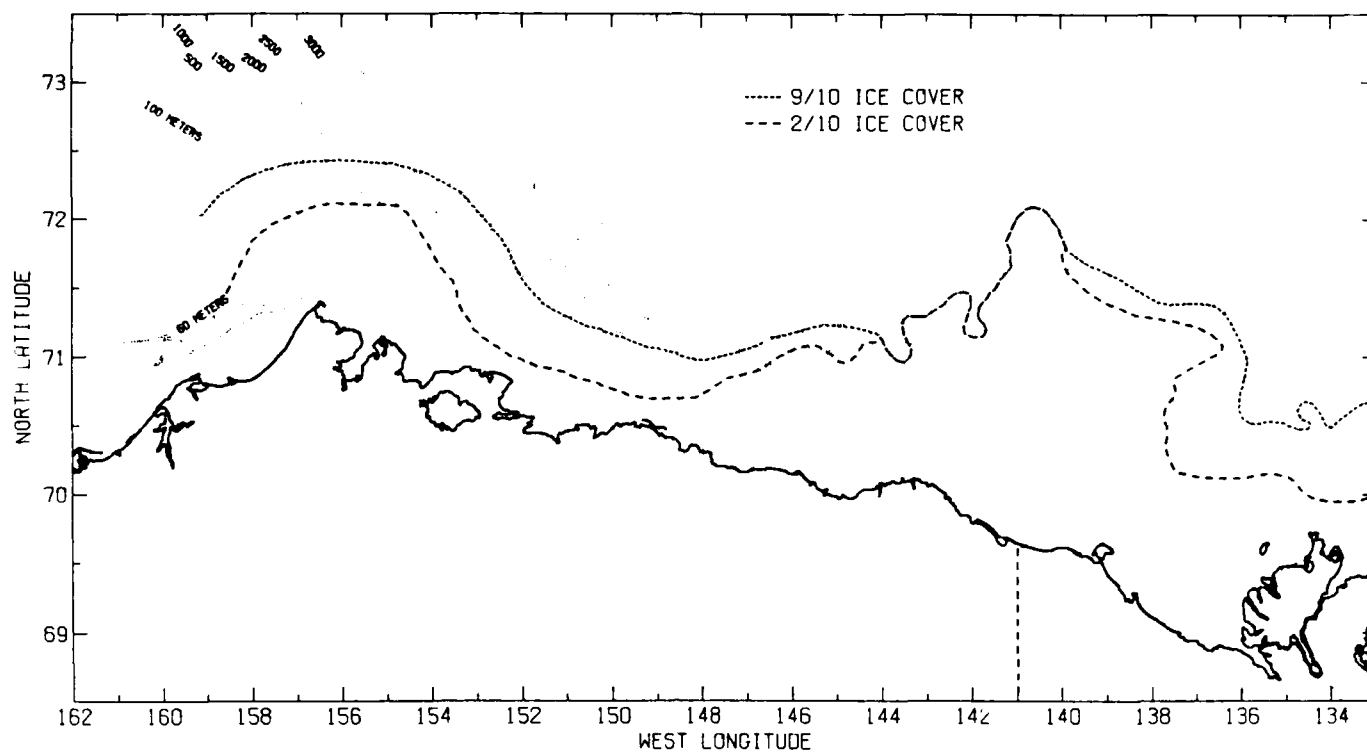


Figure 18. Ice cover reported for 9 September by Environment Canada.

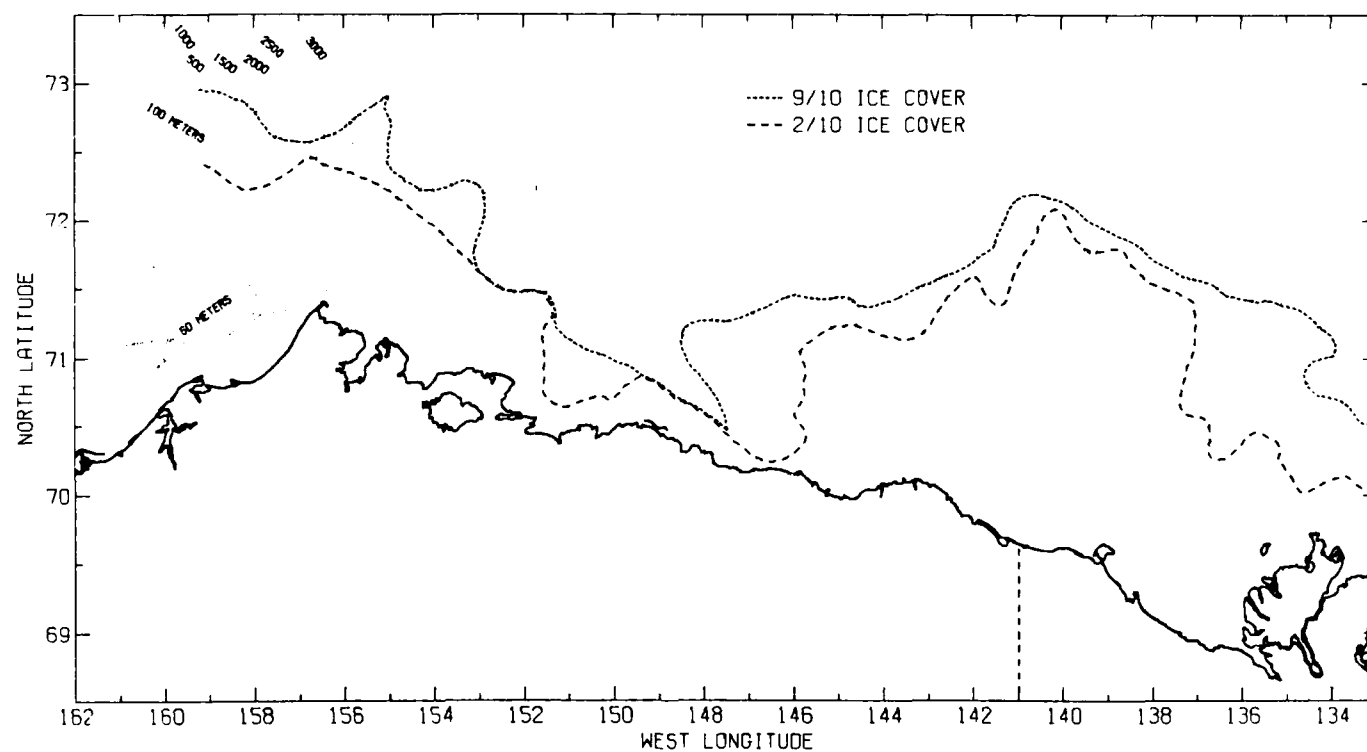


Figure 19. Ice cover reported for 13 September by Environment Canada.

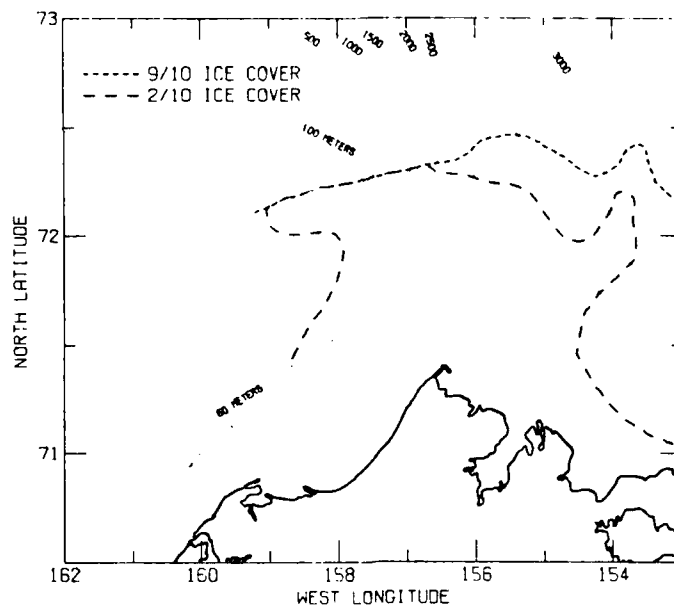


Figure 20. Ice cover reported for 3 September. This is representative of the first Barrow Canyon study.

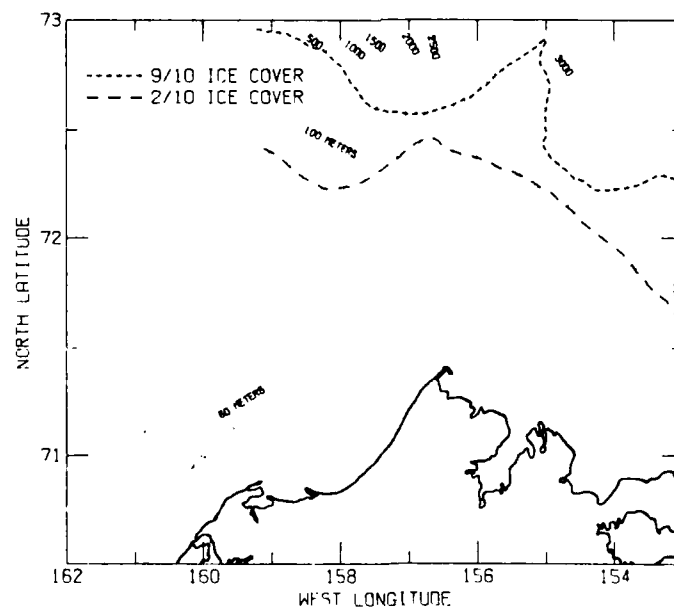


Figure 21. Ice cover reported for 13 September. This is representative of the second Barrow Canyon study.

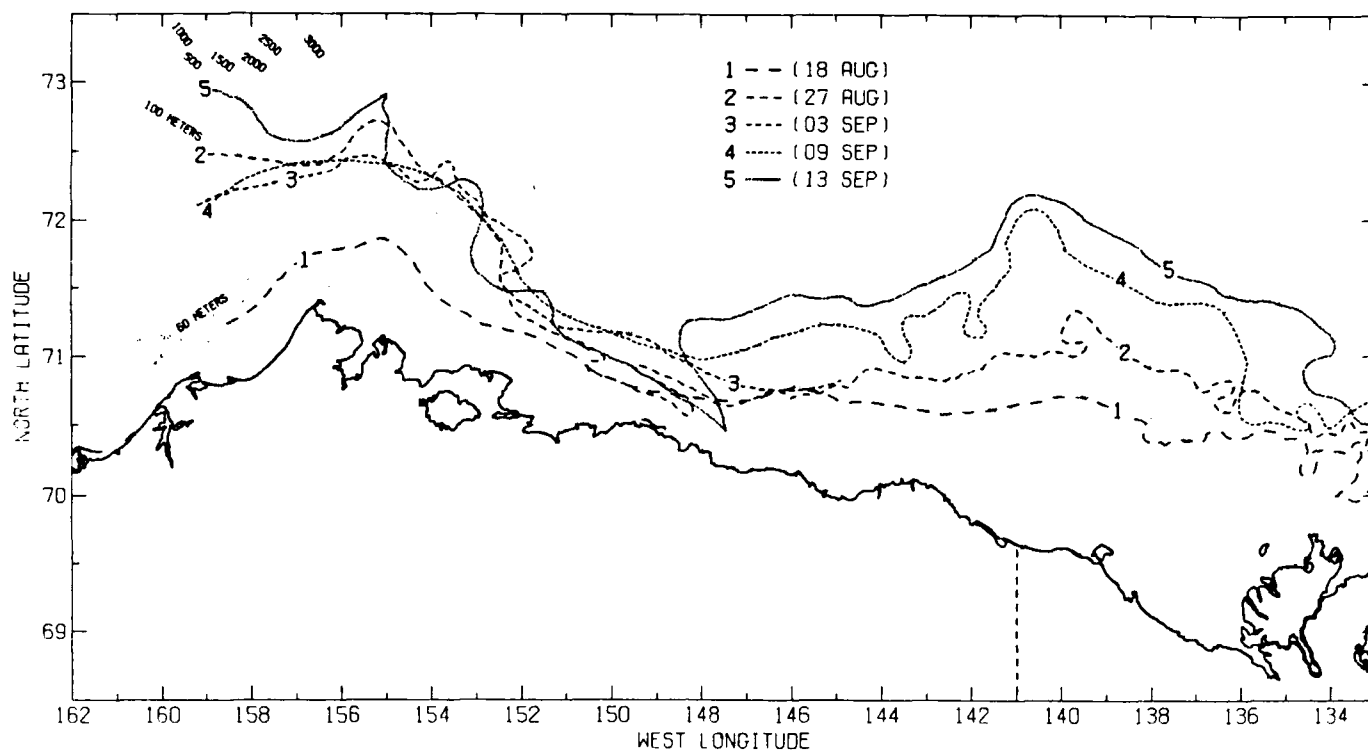


Figure 22. Lines representing 9/10 ice cover for weekly intervals during the cruise.

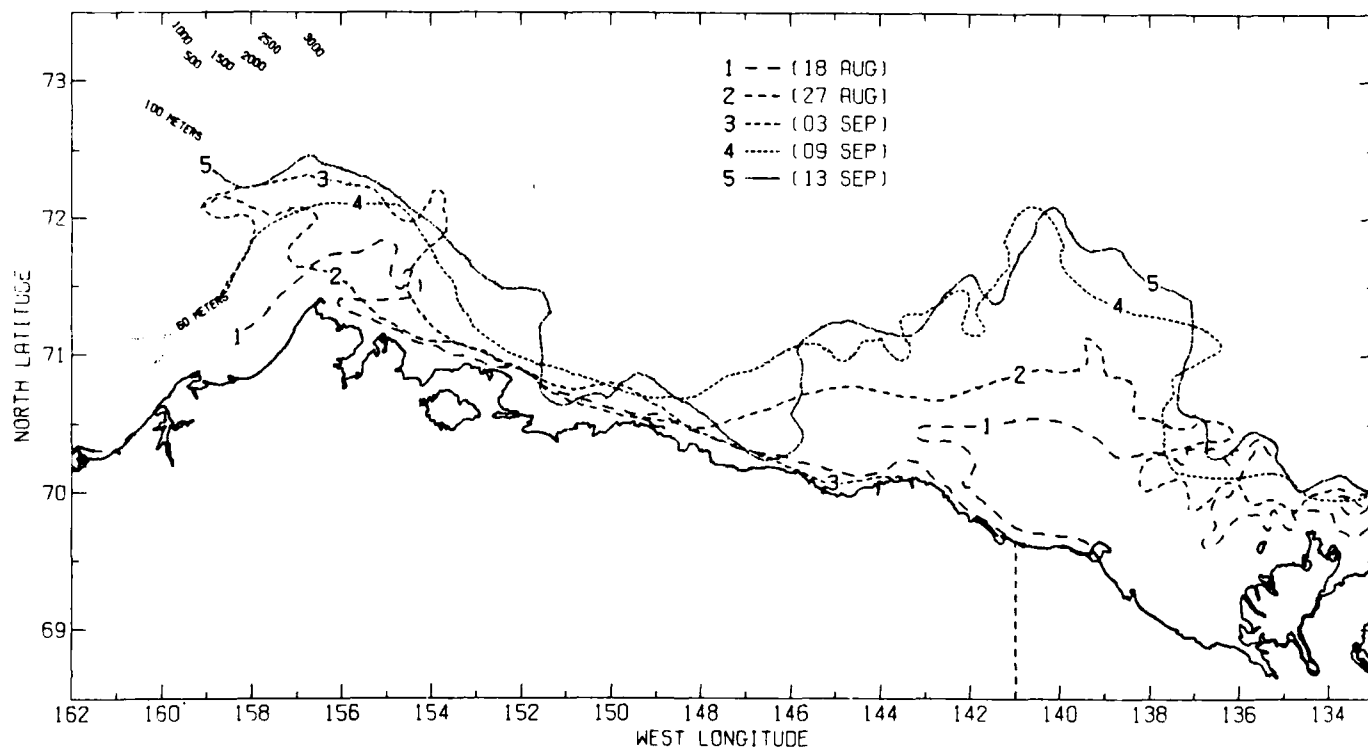


Figure 23. Lines representing 2/10 ice cover for weekly intervals during the cruise.

VI. RIVER RUNOFF

Gauging measurements for the Mackenzie River have been obtained from Environment Canada. The 1985 data, however, are available only in preliminary form. A summary of the monthly runoff at a station on the main channel that is reported to represent at least 84% of the Mackenzie River flow is given for the 12 years prior to 1985 in Figure 24. Preliminary data for 1985 indicate that the monthly distribution was typical of the previous 12 years. The annual runoff, with a 12-year average of $282 \text{ km}^3/\text{year}$, is plotted in Figure 25, along with the preliminary value of $293 \text{ km}^3/\text{year}$ reported for 1985. This is a transport of 0.01 Sv compared with 0.6 Sv for the Alaskan Coastal Current northward through Bering Strait. Assuming this runoff was distributed over the area seen on the IR image (or on the surface temperature plot in Figure 60), we calculated the thickness of water added by the river during June–August and during the year. The results are shown in Table III.

A study¹⁴ of the Mackenzie River delta shows average temperatures as follows: May, 0°C ; June, 7°C ; July, 15°C ; August, 14°C ; September, 3°C ; October, 0°C . Since the river water is still cold in May, only the June–August flow would be effective in warming the surface layer. Table III shows that this warm water could be 4–5 m thick, indicating that the Mackenzie River may have an appreciable effect on ice melt some 200 km (108 n.mi.) from the mouth, perhaps farther at times when the discharge pattern is thinner or more elongated.

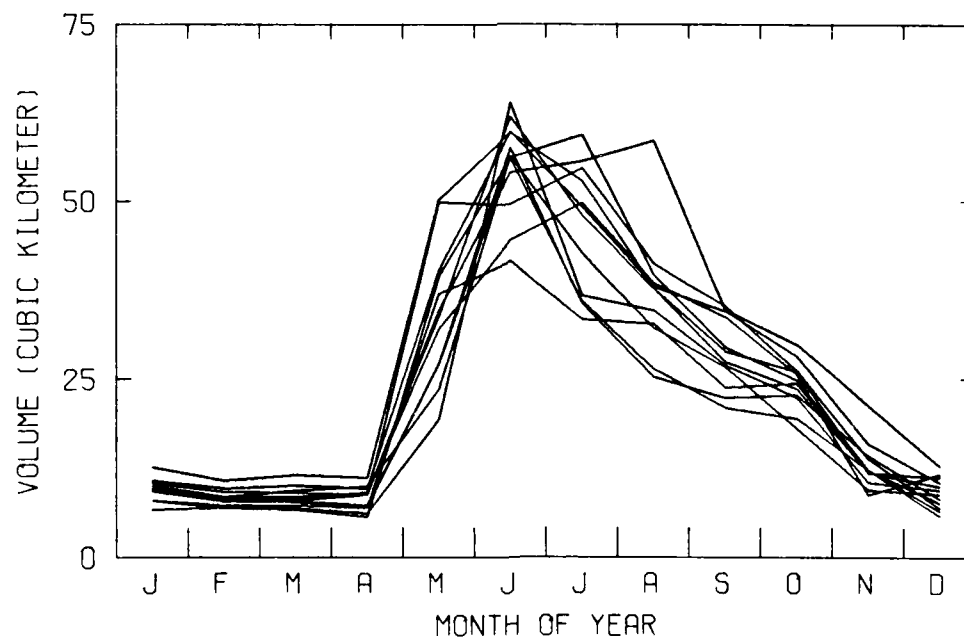


Figure 24. Monthly totals for Mackenzie River flow, 1973-1984.

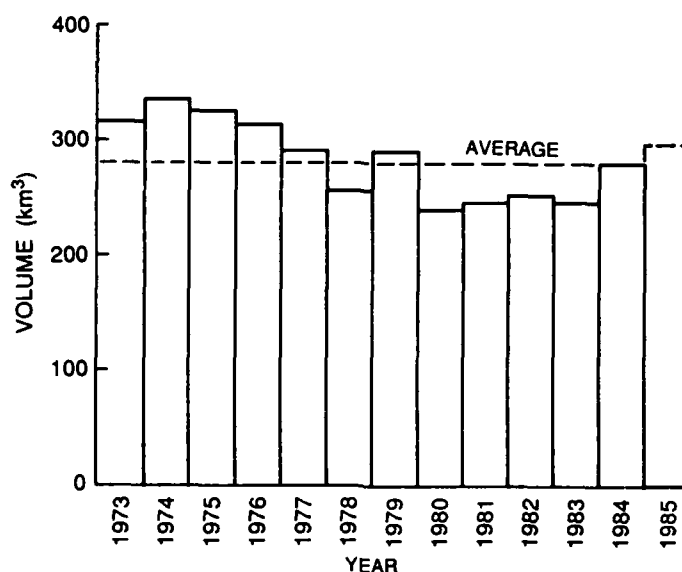


Figure 25. Annual Mackenzie River flow for years 1973-1984 as reported by Environment Canada. A preliminary value for 1985 has been added.

Table III. Thickness of layer produced (volume/area).

	3 Mo. Flow	Yearly Flow
Warm area from IR image 185 × 130 km	5.7 m	11.8 m
Warm area from CTD near-surface temperature 220 × 150 km	4.1 m	8.6 m

In making these calculations, other rivers that enter the Beaufort Sea between Pt. Barrow and the Mackenzie have been ignored, since the flow from even the largest of these, the Kuparik River (which has an annual flow of about 1.2 km^3) and the Sagavanirktok River (which has an annual flow of about 1.0 km^3), is small compared with that of the Mackenzie River ($282 \text{ km}^3/\text{year}$).

From the records of river flow and temperature provided by Environment Canada, we compute that the heat added (with respect to the ambient water temperature of -2°C) by the Mackenzie River for the year was 2.4×10^{15} kilocalories. Using the temperature profiles shown in Appendix A, we estimate the heat added to the water column was 3×10^{15} kilocalories — in close agreement. The effect of Mackenzie River runoff on salinity should be several times as great as on temperature, because of the drastic difference in the salinity of fresh and seawater and the greater effective volumes involved (an entire year's flow of fresh water vs 3 mo. of warm water).

A similar calculation for the heat change caused by the Alaskan Coastal Current in and east of the Barrow Canyon gives 6×10^{15} kilocalories. This means that the Mackenzie River, with 1/60 the volume input by the Alaskan Coastal Current through Bering Strait, has nearly as much influence in the Beaufort Sea. This is mainly because only a small portion of the flow through Bering Strait enters the Beaufort Sea via the Barrow Canyon. A secondary reason is that more heat is lost during the longer travel of the coastal current. These comparisons stress the importance of the Mackenzie River to Beaufort Sea oceanography.

VII. TEMPERATURE AND SALINITY MEASUREMENTS

Two CTD systems were operated during the cruise, one by ASL and the other by APL. Each system had its advantages, and the duplication provided added confidence in the results. In this section, we will first describe the instrumentation and its calibration, and then present the data in the form of vertical profiles and temperature-salinity (TS) diagrams.

A. Instrumentation

The CTD unit used by ASL was a Neil Brown system (Model III, Serial No. D1-01-2904-1). The sensors were attached to the end of the cable on the ship's oceanographic winch, and the upper end of the cable was connected to a recording system.

During the cruise, all data were recorded on magnetic media as raw sensor signals in real time. Processing was performed at varying time scales and to varying extents, from immediate plotting of all calculable and directly observable parameters (ASL) to spot checking and limited plotting of some parameters (APL). This was facilitated through use of the ASL Hewlett-Packard 110 portable "lap-top" computer system. This system not only logged data at 5 Hz in real time, but stored the raw data on disk and then calculated and plotted all parameters, using routines stored in RAM, by means of simple commands from the keyboard. This enabled the watch-standers to examine enhanced or modified profiles immediately as well as TS plots and tabular listings. The availability of the system and its flexibility were of unquestionable value both at the time and during subsequent processing.

Post-processing of ASL data was a simple matter of assigning station numbers to all casts and selecting the most appropriate format parameters for compatibility with the APL data.

The CTD system used by APL has been described in a previous report.¹⁵ The system was manufactured at APL and used as a lightweight portable profiler for numerous arctic expeditions. A small hand-powered winch, with a tape recorder mounted in the hub to avoid the need for slip rings, was fastened in place on the deck. The sensor cable was supported on a light boom 2 m forward of the ASL system. The APL cast was usually made immediately after the ASL cast was completed. Occasionally, the APL CTD system was operated from a helicopter which landed on the ice. At the completion of the APL cast, the cassette tape was removed and taken to a dry laboratory, where preliminary plots of the temperature and salinity profiles were produced in half an hour.

Post-processing of APL data consisted of rerecording the data on the cassettes onto nine-track tape, selecting calibration constants, eliminating obvious errors, and plotting vertical profiles and TS diagrams.

B. Calibration

Calibration of the two instrument systems was checked routinely. This was done by taking Nansen bottle samples at depths where properties were stable and determining their salinities with a laboratory salinometer calibrated with standard seawater.

The ASL Neil Brown CTD system was post-calibrated at the Northwest Regional Calibration Center (NRRC) in a continuing program of regular calibrations at that facility. The APL CTD system employed sensors with long calibration histories and known stability; the sensors were calibrated 6 mo. before the cruise and recalibrated 2 mo. afterward at NRRC.

Comparison of both systems with bottle samples, combined with post-calibration, indicated 95% confidence levels of $\pm 0.01^\circ\text{C}$ for temperature, $\pm 0.02\text{‰}$ for salinity, and ± 0.25 m for depth.

C. Vertical Profiles

Vertical profiles of temperature, salinity, sound speed, and density (σ_T) were obtained with both the ASL and APL CTD units. Usually ASL's was employed first and APL's immediately afterward. The ASL system could be operated to a depth of 550 m, whereas the APL unit was limited to 300 m by the cable length. The ASL probe was considered too valuable to risk contacting the bottom. The APL probe was lowered to the bottom routinely and thus obtained additional information on bottom layers.

CTD stations were occupied at intervals along lines perpendicular to the coast as will be discussed in the next section. An example of the plotted profiles is shown in Figure 26. When both units were operated at the same station, the two profiles are plotted on the same page. At the bottom of the page are tabulated values of the parameters at 5 m depth intervals, increased to 10 m intervals at middle depths and 15 m at lower depths. At the top of the plot are indicated the station number, time, and location and the system and platform in use.

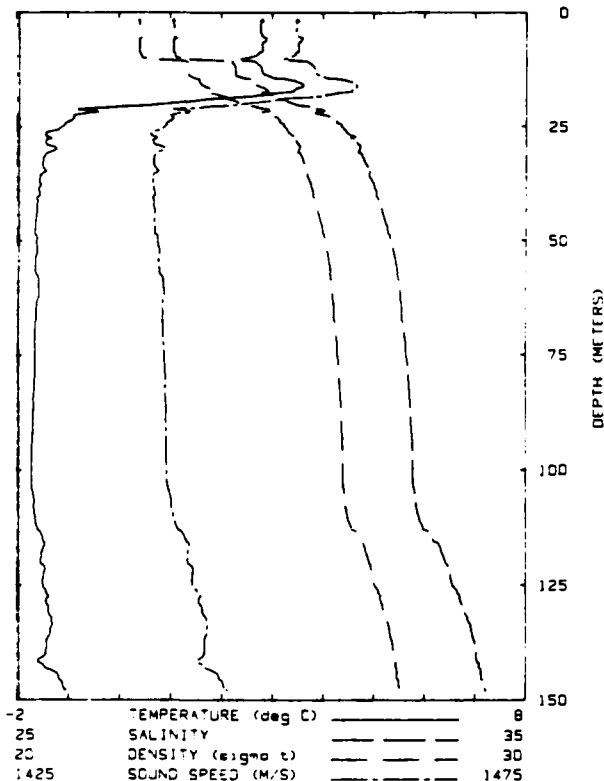
Each laboratory had its own method of presenting the profiles. The two sets of profiles should agree except for slight changes with location or time during the half hour between the two casts, when some ship drift may have occurred. At times, only the ASL system was used on board. When a helicopter was used as a platform, only the APL system was employed.

All profiles are presented in Appendix A in the order taken. A separate station number was given to each CTD system when both were used at the same location.

Often when there is a sharp change in temperature there is also one in the other properties. If the temperature and conductivity are not measured for the same water, or

Station Number 77 78 ASL Cast X APL Cast X Julian Day 246 GMT hhmm 0650 Platform Ship Latitude 72 1.9 Longitude 155 29.6

77



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.0	2.0	3.03	25.775	28.046	22.385	1452.8
1.7	1.7	3.00	25.784	28.055	22.394	1452.5
6.4	6.4	2.85	25.809	28.080	22.394	1452.8
11.3	11.2	2.70	26.854	28.209	23.319	1453.7
18.2	18.1	3.01	27.777	28.716	23.650	1456.3
21.0	20.8	-0.10	25.888	30.771	24.728	1442.9
28.3	28.1	-1.37	25.306	31.480	25.319	1438.3
31.8	31.8	-1.47	25.467	31.785	25.585	1438.4
35.0	34.8	-1.42	25.806	31.921	25.683	1438.9
35.8	35.7	-1.54	25.508	31.811	25.689	1438.3
39.8	39.6	-1.55	25.601	32.053	25.803	1438.5
44.9	44.8	-1.82	25.653	32.198	25.823	1438.4
50.1	49.8	-1.81	25.781	32.334	26.033	1438.7
55.2	54.9	-1.85	25.813	32.441	26.119	1438.8
60.2	59.8	-1.97	25.936	32.520	26.162	1439.4
65.2	64.8	-1.83	25.924	32.588	26.221	1439.2
70.2	69.7	-1.88	25.939	32.614	26.280	1439.4
75.1	74.6	-1.85	25.876	32.653	26.292	1439.4
80.0	79.5	-1.85	26.012	32.702	26.332	1439.5
84.8	84.3	-1.88	26.008	32.738	26.352	1439.5
89.7	89.1	-1.88	26.021	32.754	26.374	1439.6
94.8	94.0	-1.71	26.031	32.761	26.387	1439.6
99.5	98.8	-1.72	26.030	32.780	26.404	1439.6
104.3	103.7	-1.71	26.051	32.807	26.418	1439.8
109.1	108.4	-1.88	26.138	32.868	26.466	1440.2
114.0	113.2	-1.58	26.387	33.100	26.852	1441.0
118.8	118.0	-1.51	26.618	33.363	26.883	1441.7
123.7	122.9	-1.48	26.770	33.529	26.987	1442.2
128.7	127.8	-1.40	26.860	33.701	27.134	1442.8
133.3	132.4	-1.31	27.154	33.862	27.262	1443.8
138.1	137.1	-1.41	27.170	33.999	27.378	1443.3
142.9	141.9	-1.57	27.089	34.083	27.448	1442.8
147.7	146.8	-1.10	27.558	34.188	27.503	1445.2
148.7	147.8	-1.04	27.847	34.222	27.544	1445.8

78



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	3.12	1453.9	22.39	28.07
10.4	2.78	1454.1	23.32	29.21
15.1	.96	1449.5	24.33	30.36
20.3	-.59	1442.9	24.84	30.90
25.1	-.98	1441.3	25.21	31.34
30.3	-1.17	1440.4	25.47	31.65
35.3	-1.55	1438.9	25.64	31.86
40.3	-1.60	1438.8	25.80	32.05
45.0	-1.63	1438.8	25.93	32.20
50.0	-1.63	1439.0	26.04	32.34
55.2	-1.42	1440.0	26.12	32.44
60.2	-1.55	1439.7	26.15	32.48
65.3	-1.61	1439.5	26.19	32.53
70.2	-1.62	1439.6	26.24	32.59
75.0	-1.64	1439.6	26.27	32.63
80.2	-1.66	1439.7	26.31	32.67
85.3	-1.67	1439.7	26.33	32.70
90.3	-1.66	1439.9	26.35	32.72
95.3	-1.67	1440.0	26.37	32.74
100.2	-1.68	1440.0	26.37	32.75
110.1	-1.63	1440.5	26.44	32.83
120.0	-1.52	1441.9	26.87	33.37
130.4	-1.37	1443.3	27.18	33.75
140.2	-1.43	1443.6	27.37	33.99
150.9	-.95	1446.2	27.62	34.31
160.2	-.49	1448.7	27.71	34.45
170.1	-.29	1450.0	27.77	34.54
180.0	-.14	1451.0	27.82	34.61
190.0	.18	1452.7	27.90	34.73
200.1	.35	1453.8	27.93	34.78
210.1	.35	1454.0	27.93	34.78
210.1	.35	1454.0	27.93	34.78

Figure 26. Sample presentation of CTD profile (above) and tabulated data at 5-15 m intervals (below).

equivalent water, the computed salinity, which depends on both temperature and conductivity, will show an erroneous reading followed by a gradual change back to the correct one. Such errors have to be considered before ascribing a decrease in salinity with depth as an indication of instability, which is unlikely but possible if there are differential water movements. Because of this possible equipment error when sudden temperature changes occur, we hesitate to state that any of the observed salinity excursions represent unstable conditions. One exception is station 99, where a 6 m thick layer of water at 6°C was found in water at 2°C. The layer appears to be more dense than water just below it. Readings within and below the layer were numerous and steady; therefore, we think that the change is real, and that this was an unstable condition.

D. TS Diagrams

Temperature-salinity diagrams have been plotted for many of the profiles, for both units. An example is shown in Figure 27. Near-surface variations usually make up about half the diagram and often result in loops and excursions when steep gradients are present. Composite diagrams will be presented in Section X.E, and the region of each water type will be outlined.

TS diagrams for most of the stations are shown in Appendix B. The APL diagrams have two sigma-T lines and are all at the same scale. The ASL diagrams have been expanded to show more detail. Some missing diagrams and missing salinity plots cannot be recovered without considerable delay in publication.

Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
75		X	246	0531	Ship	72 4.1	155 36.6
76	X						
77	X		246	0650	Ship	72 1.9	155 29.6
78		X					

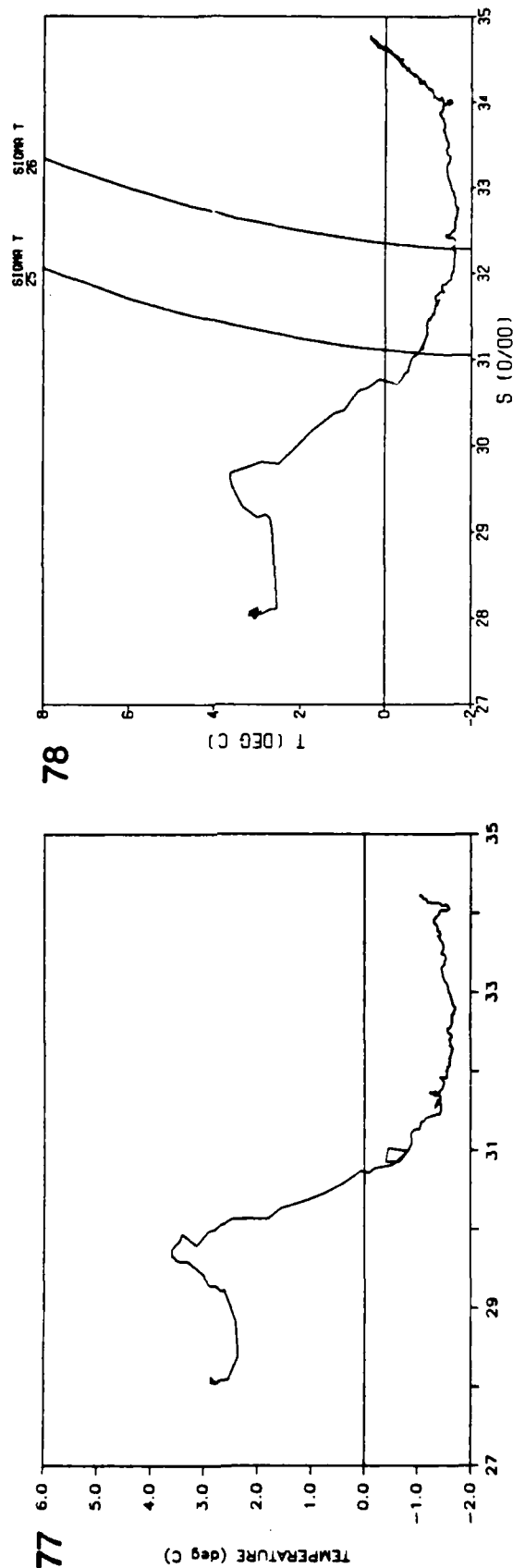


Figure 27. An example of the TS diagrams which appear in Appendix B. The APL (lightweight profiler) result is at right and the ASL (Neil Brown) result is at left.

VIII. SECTION PLOTS

Stations along lines either parallel or perpendicular to the coast were combined to form vertical sections of temperature or salinity. The selected lines, as well as the ice cover in each area at the time the stations were occupied, are shown in Figures 28–30.

The first longitudinal section through the Barrow Canyon (section G) did not follow the path of the cold Chukchi Sea bottom water. An alternate for section G (labeled G') has been constructed by using stations with the maximum amount of this cold layer (see Figure 31). In constructing the sections, isotherms and isohalines were drawn to make a smooth and logical variation between stations. The sections are presented in Figures 32–51.

In the temperature sections, two types of water are delineated by shading. The first is water warmer than $+1^{\circ}\text{C}$, which we arbitrarily considered an intrusion, either from the coastal current or from river runoff. The second is water colder than -1.5°C , which includes the bottom water that appears to form in the Chukchi Sea along the coast in the winter and move downward along the bottom of the Barrow Canyon in the spring.^{16,17}

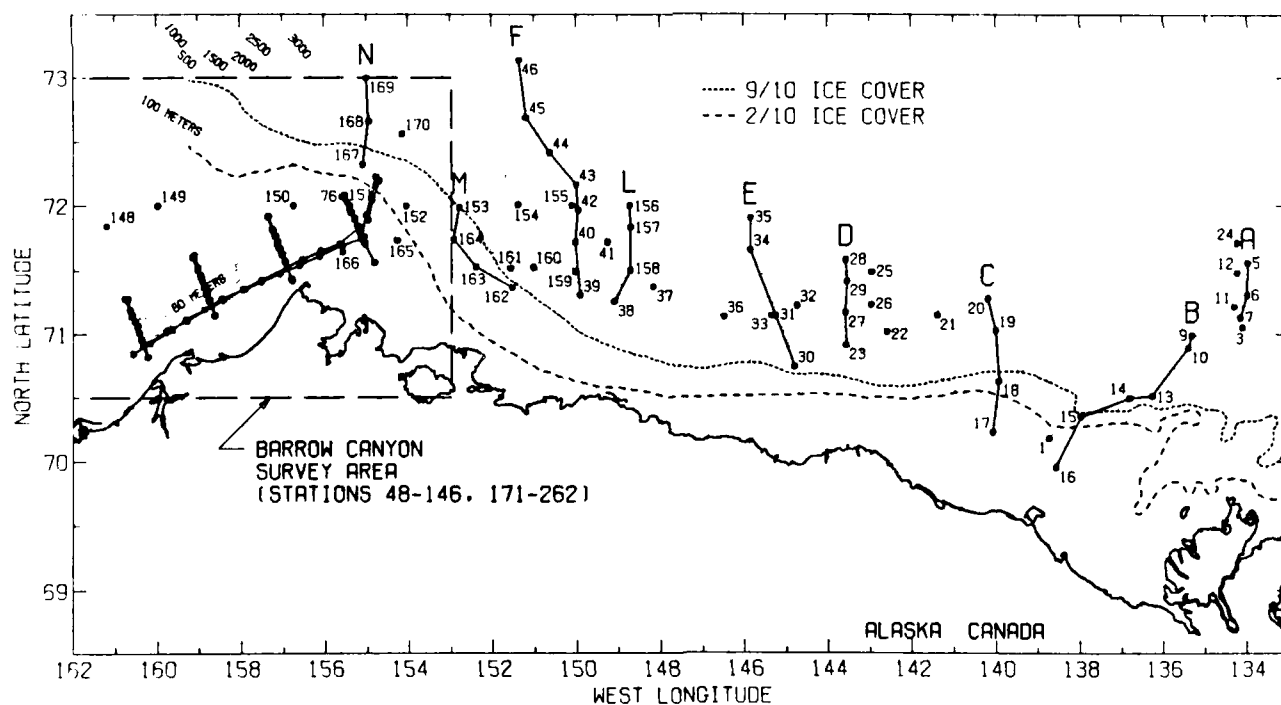


Figure 28. Selected cross sections for the survey (see details of Barrow Canyon surveys in next two figures).

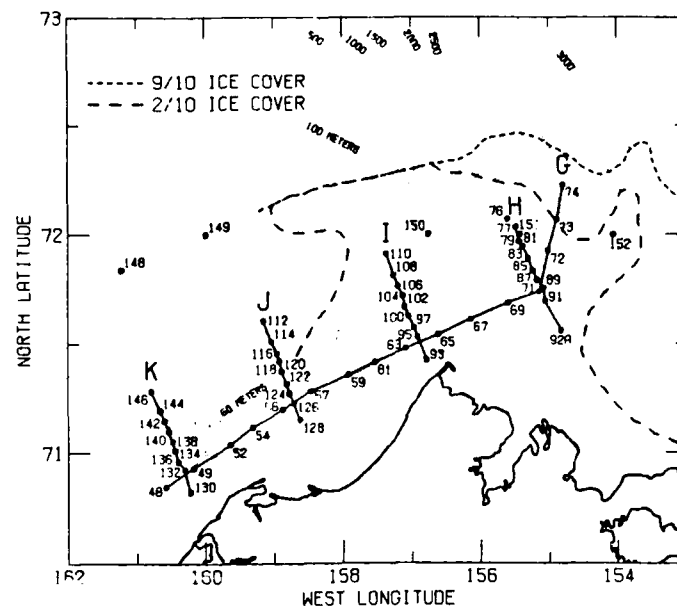


Figure 29. A longitudinal section and four cross sections for the first survey of the Barrow Canyon area.

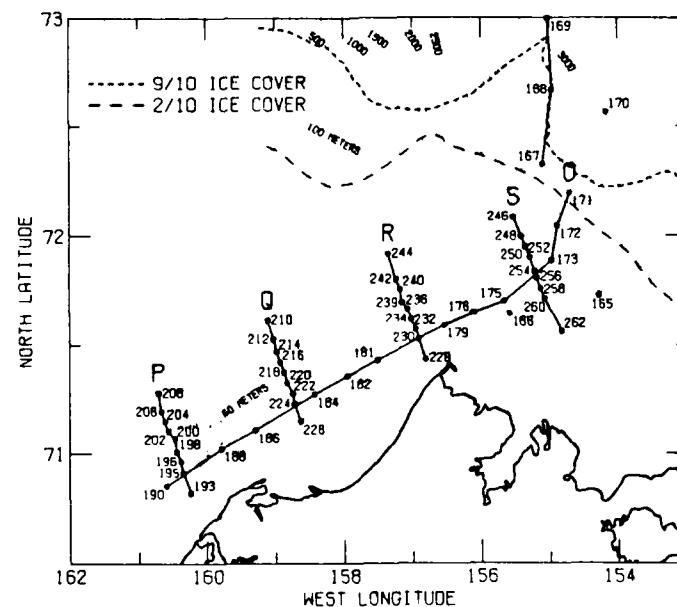


Figure 30. A longitudinal section and four cross sections for the second survey of the Barrow Canyon area.

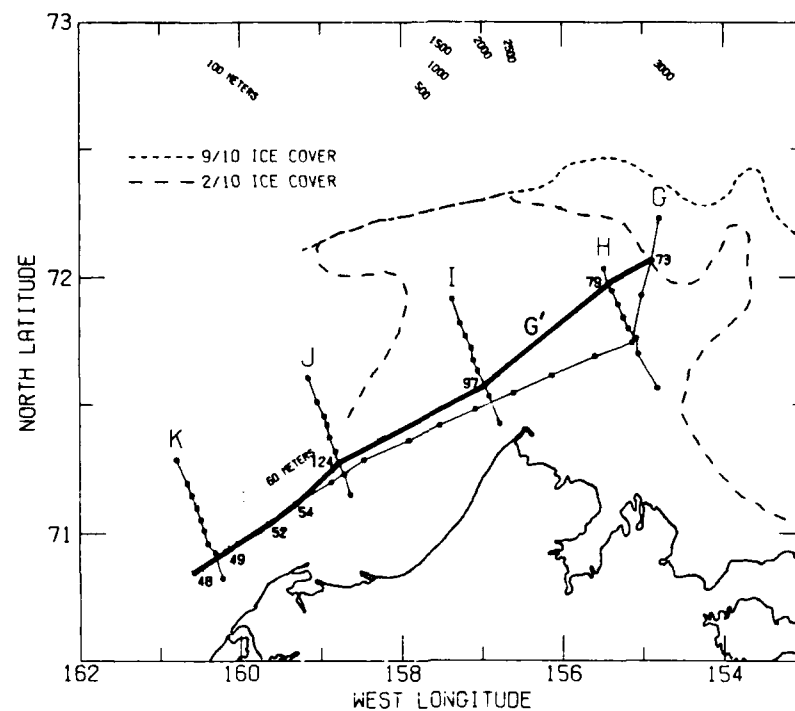


Figure 31. Section G', an alternate to Section G that better traces the bottom water down the Barrow Canyon.

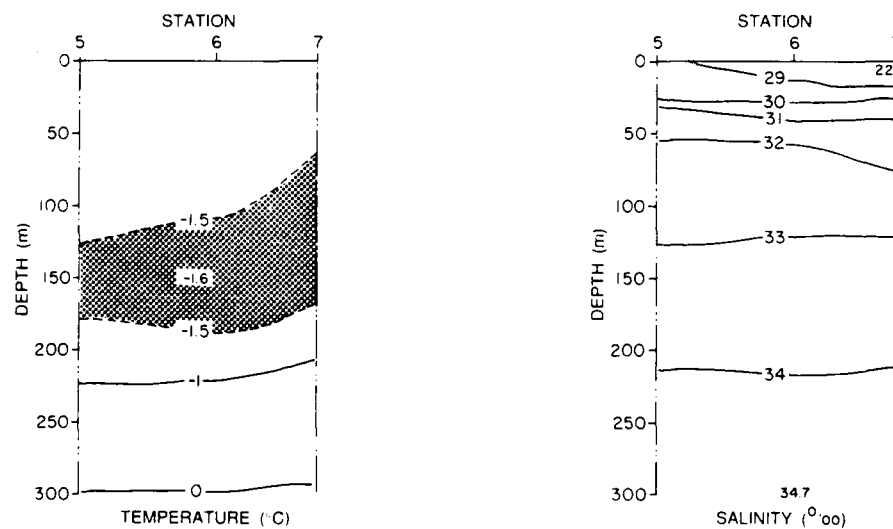


Figure 32. Line A cross sections showing temperature and salinity.

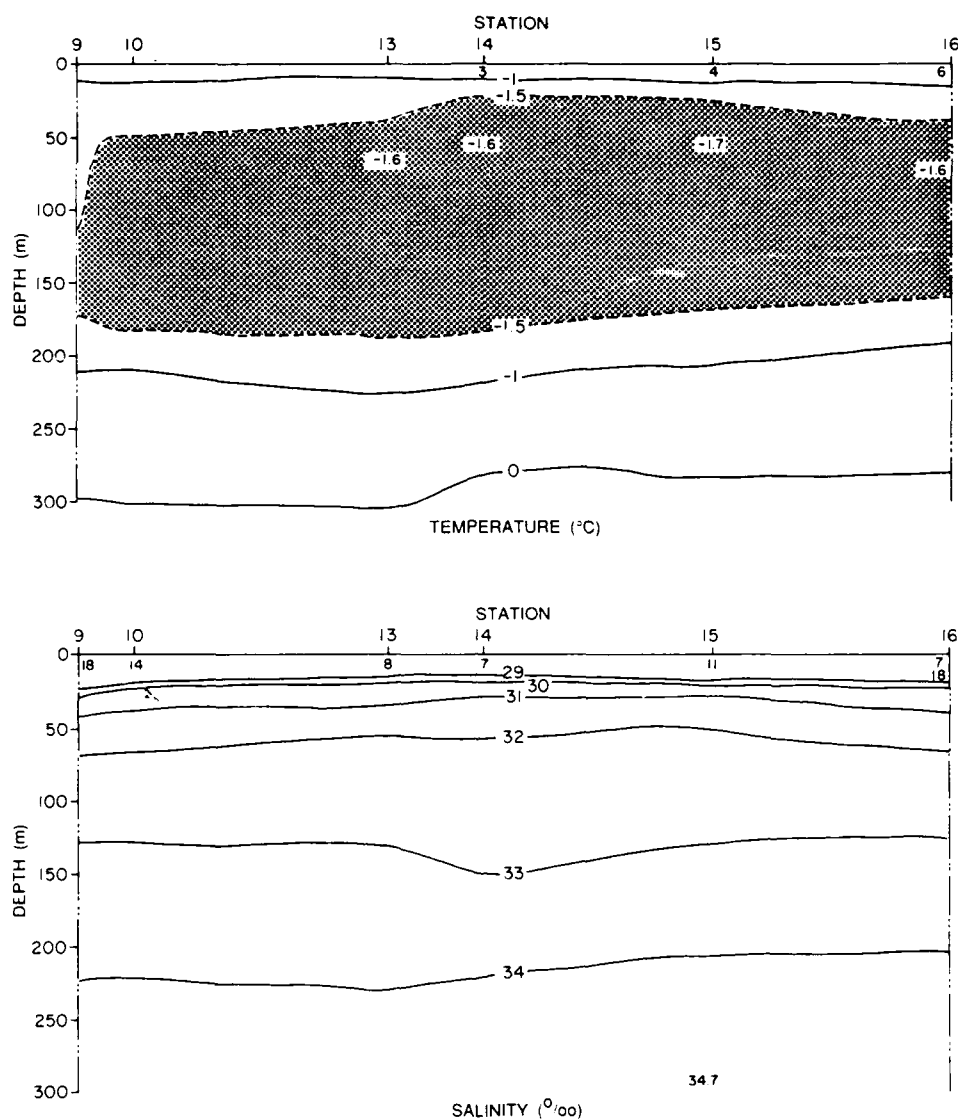


Figure 33. Line B cross sections showing temperature and salinity.

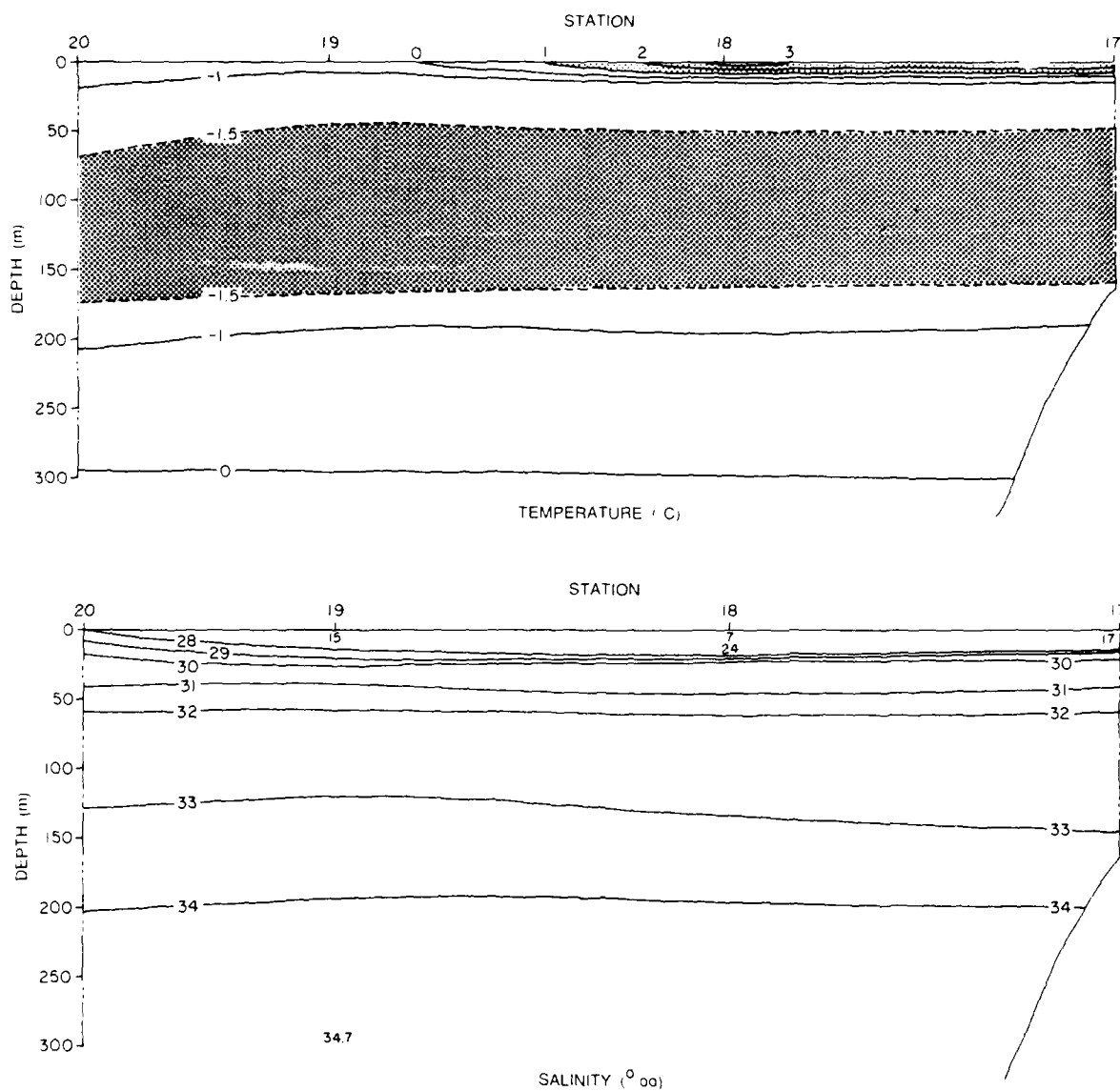


Figure 34. Line C cross sections showing temperature and salinity.

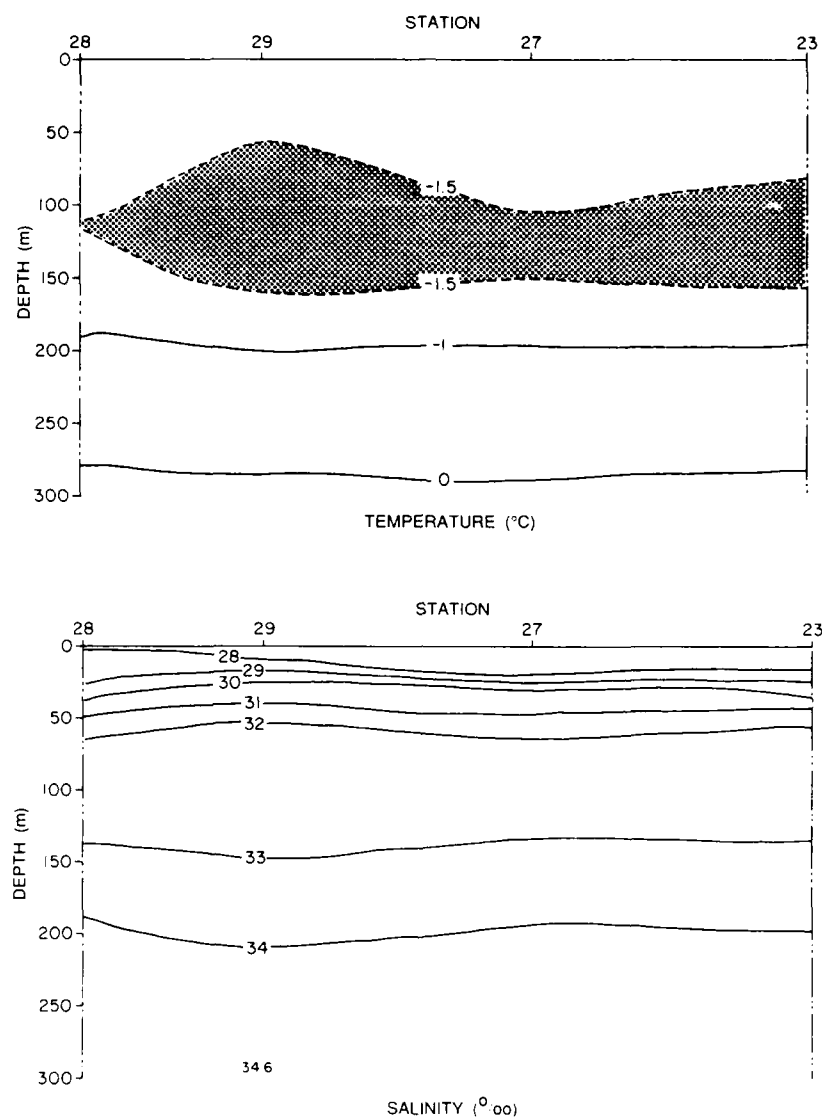


Figure 35. Line D cross sections showing temperature and salinity.

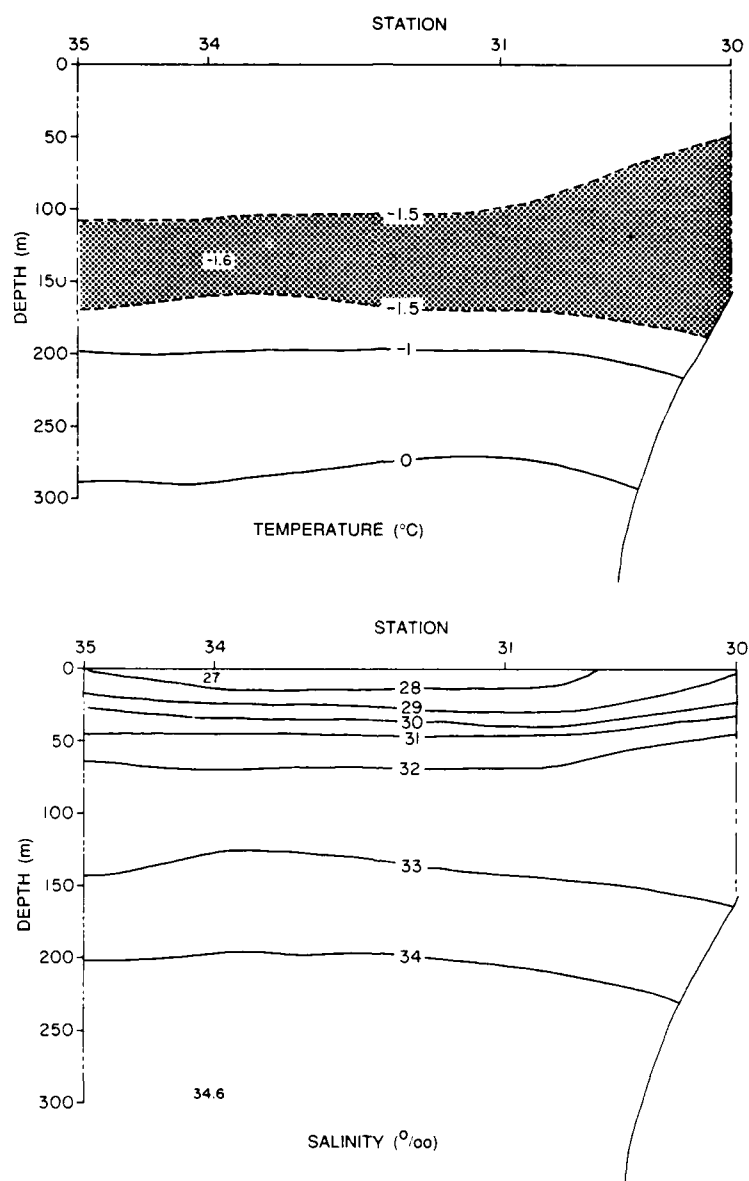


Figure 36. Line E cross sections showing temperature and salinity.

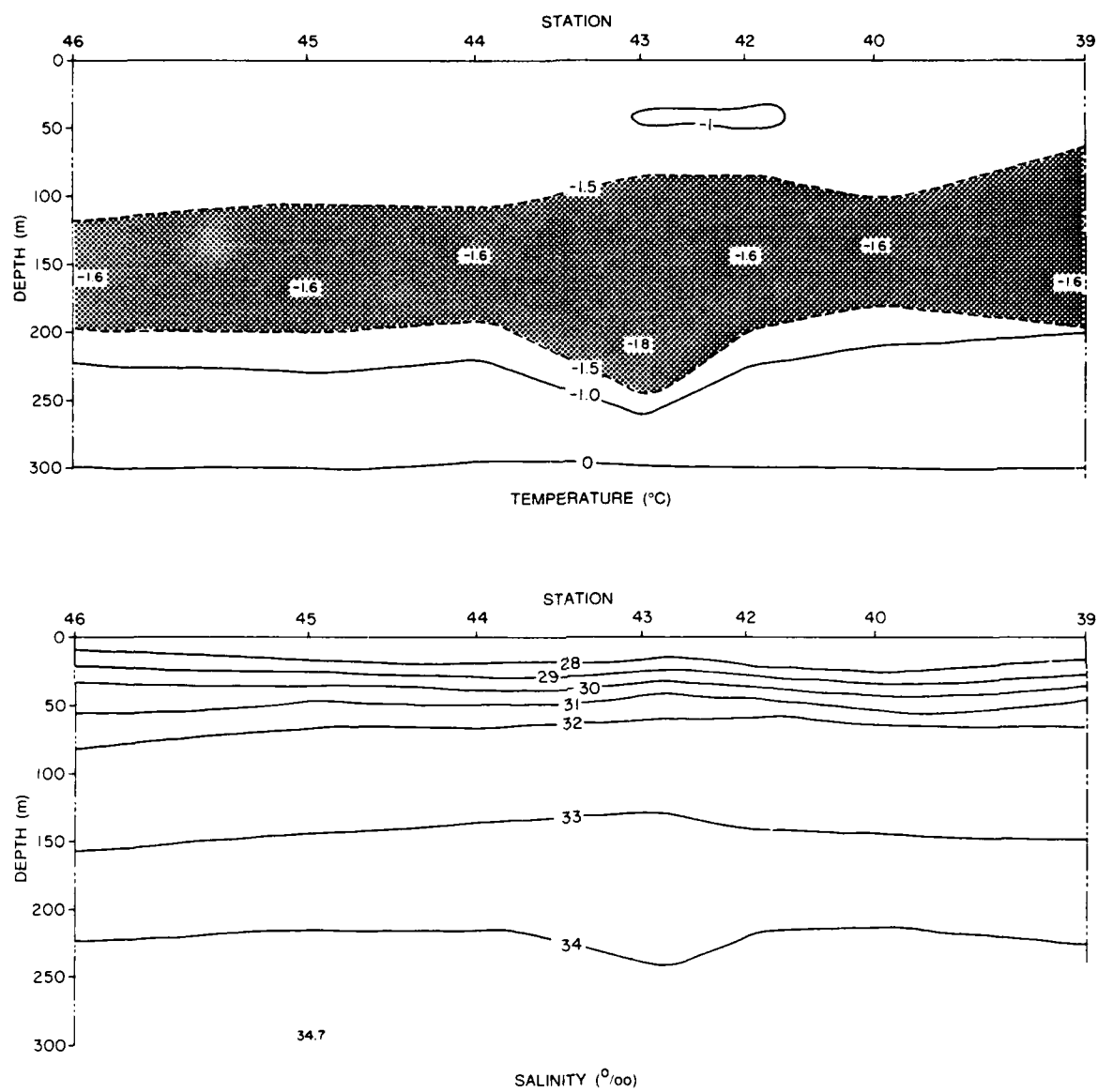


Figure 37. Line F cross sections showing temperature and salinity.

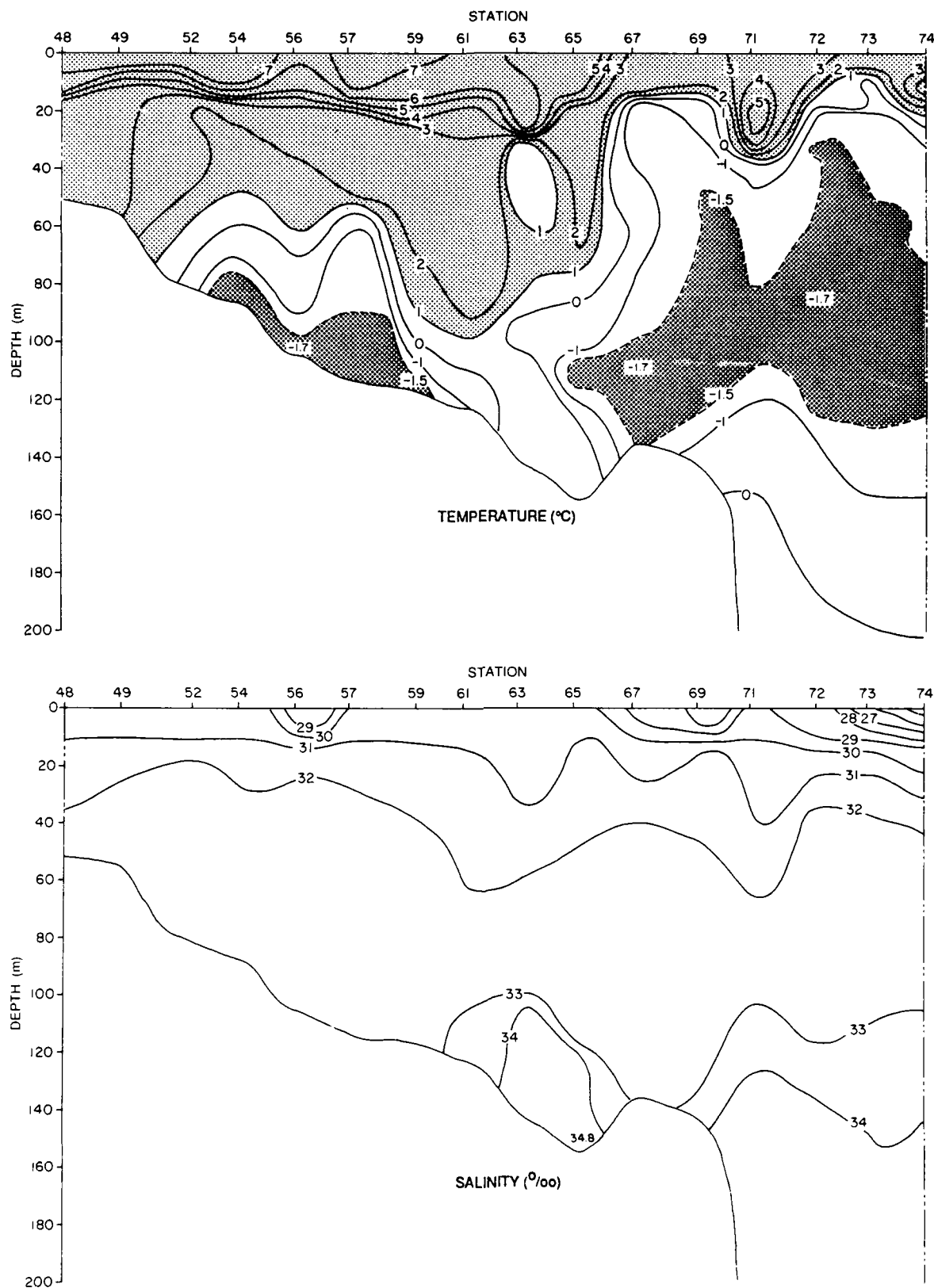


Figure 38. Line G cross sections showing temperature and salinity.

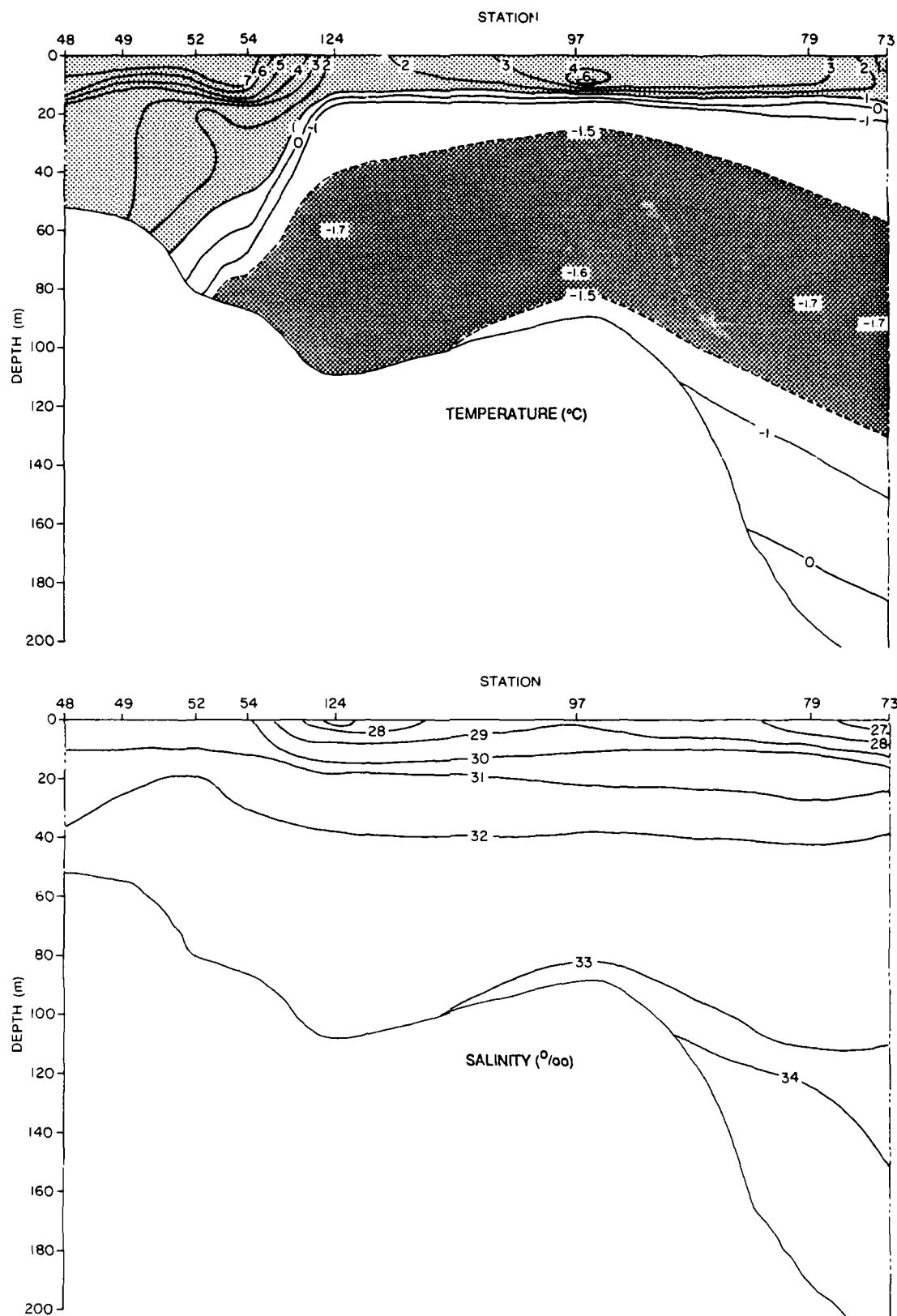


Figure 39. Line G' cross sections showing temperature and salinity.

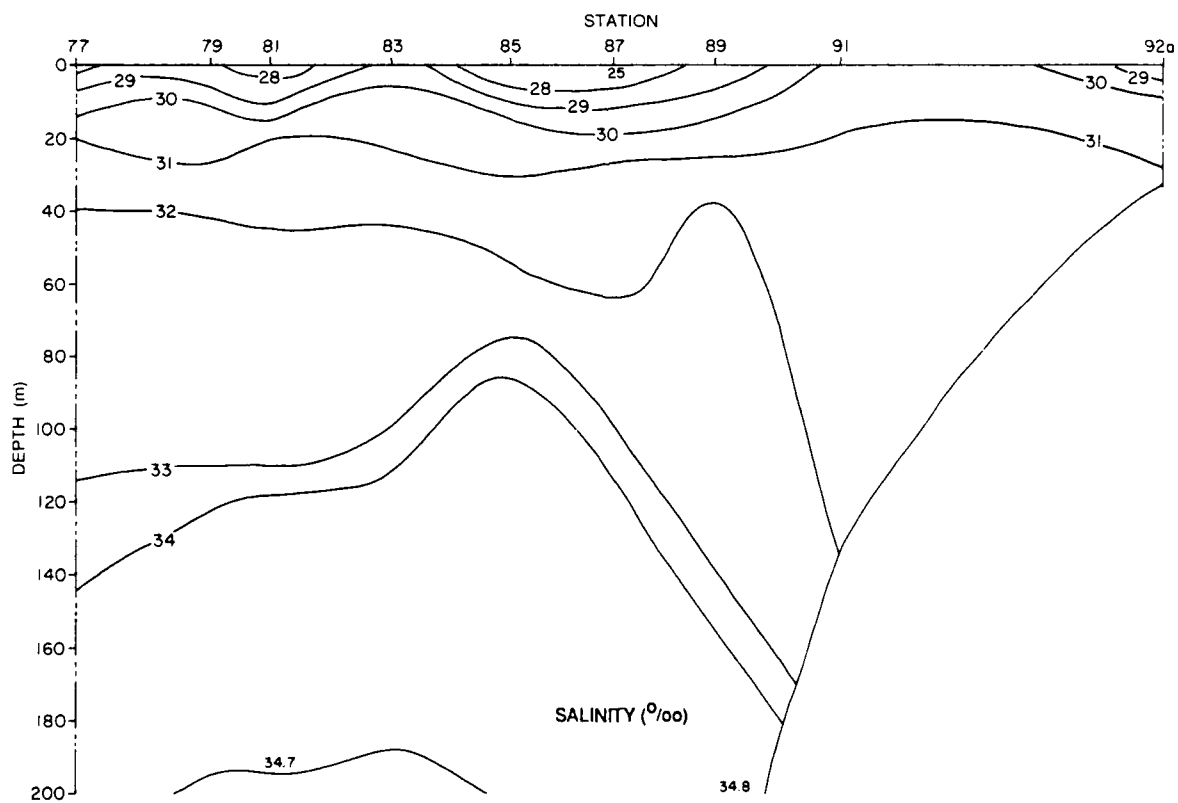
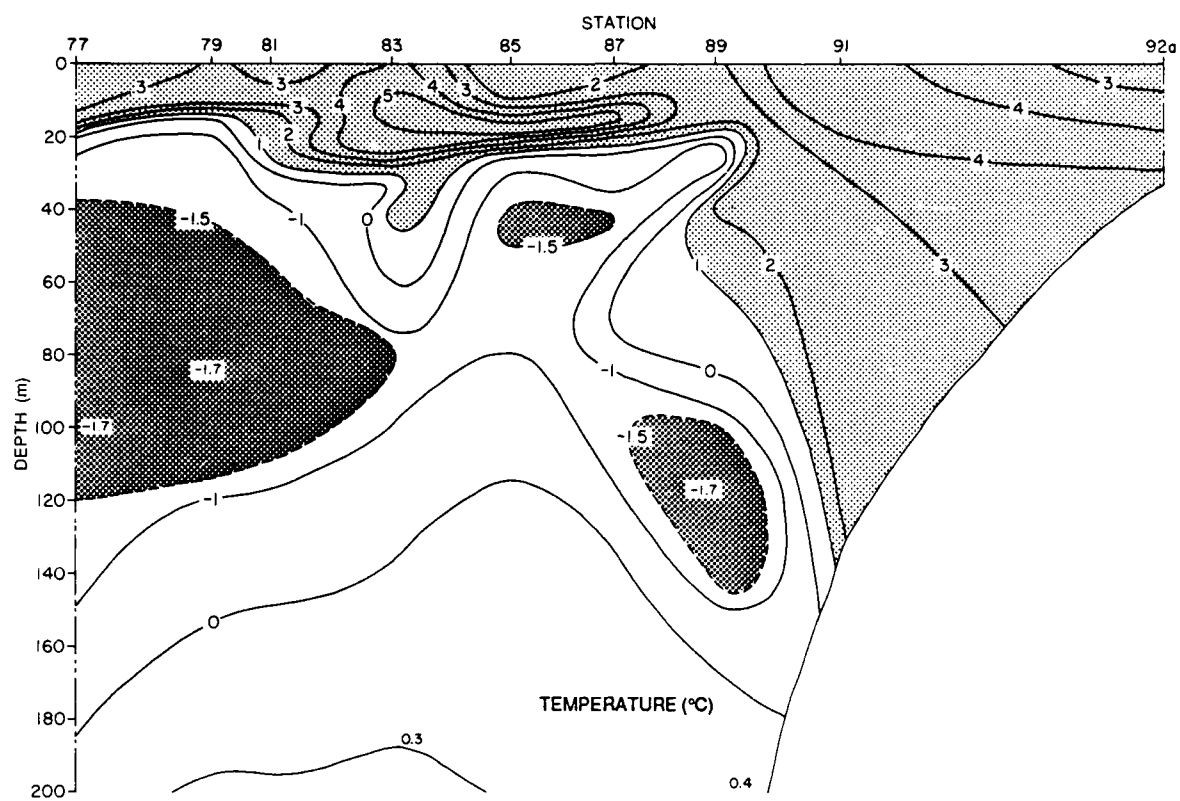


Figure 40. Line H cross sections showing temperature and salinity.

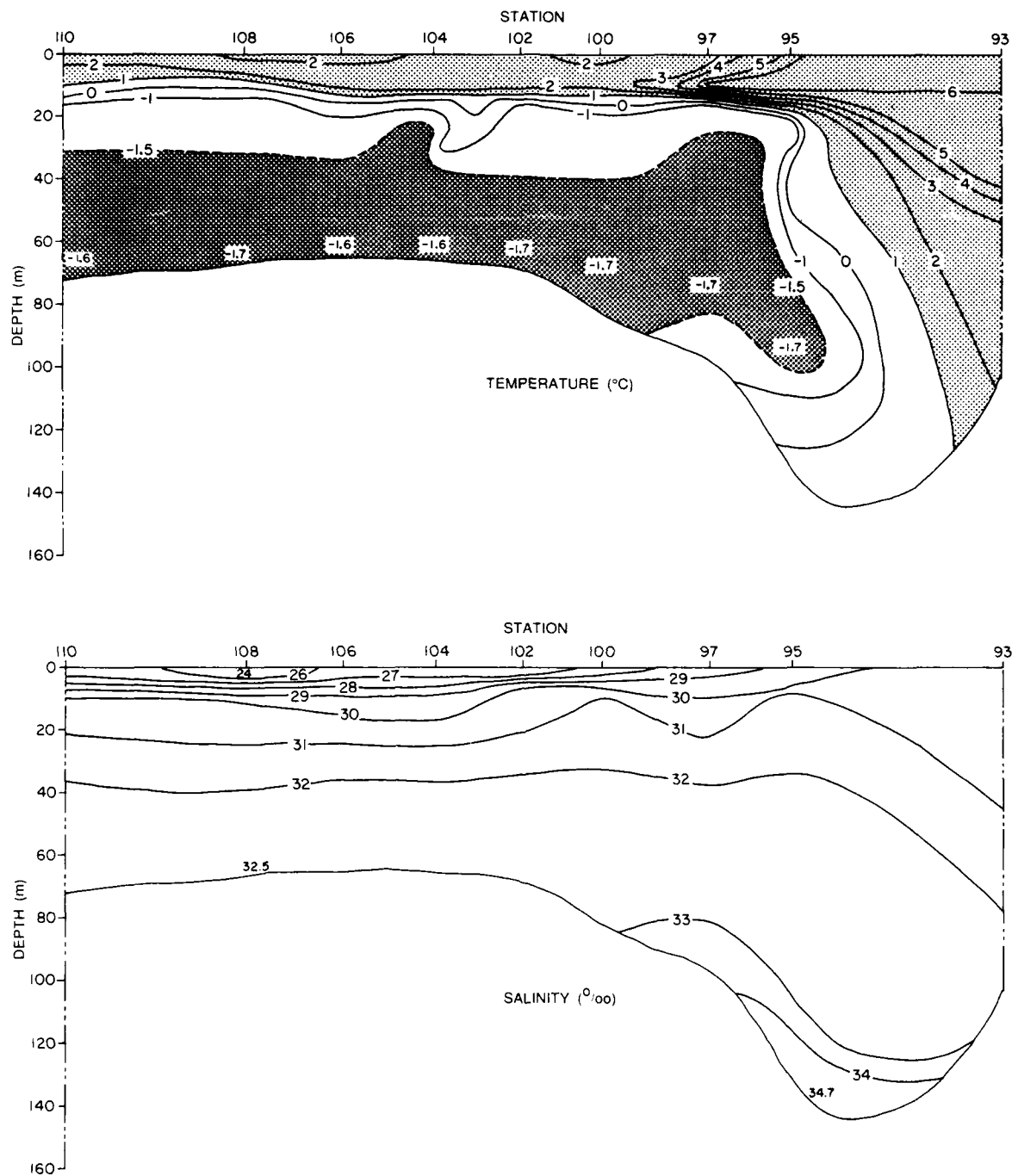


Figure 41. Line I cross sections showing temperature and salinity.

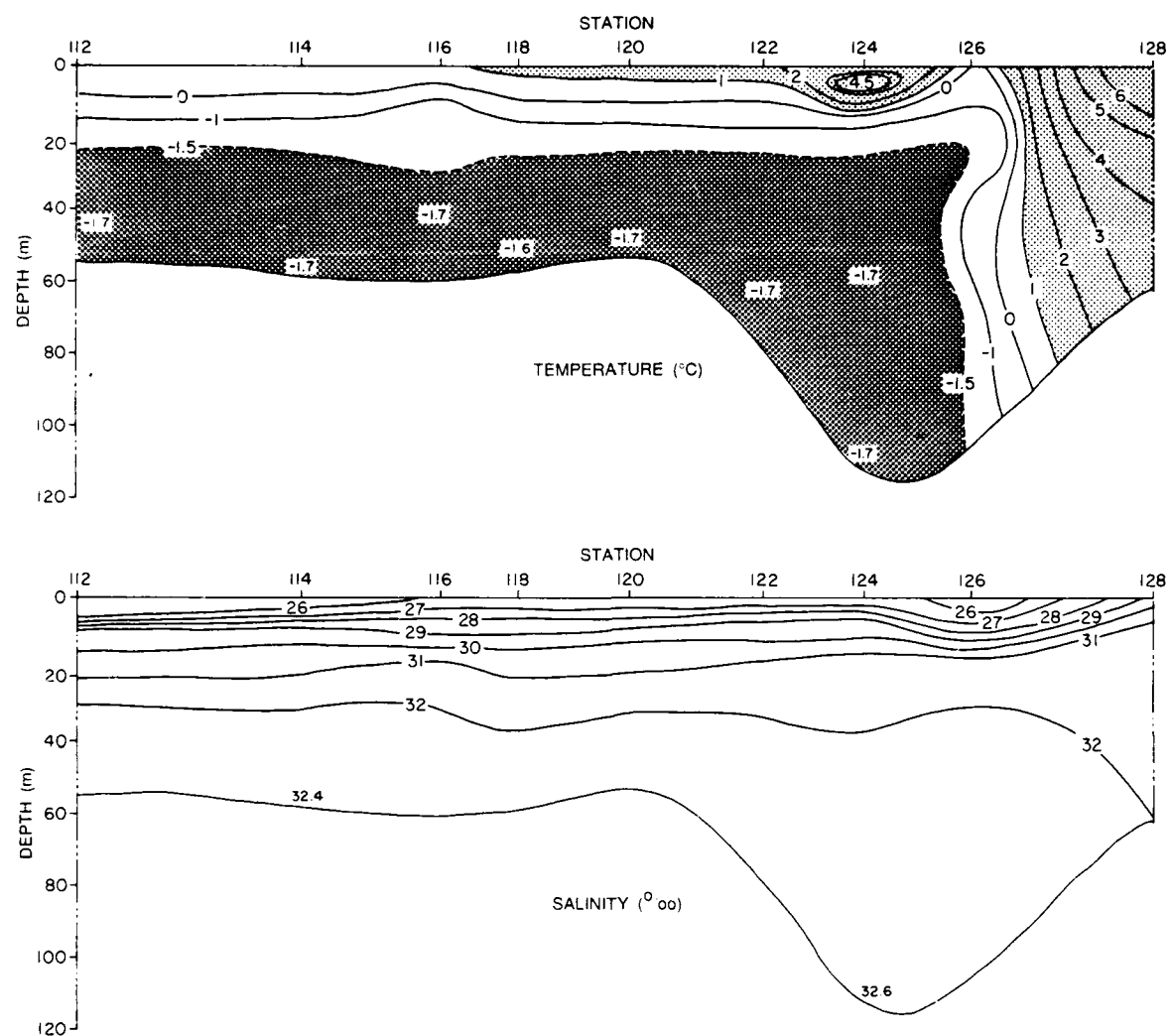


Figure 42. Line J cross sections showing temperature and salinity.

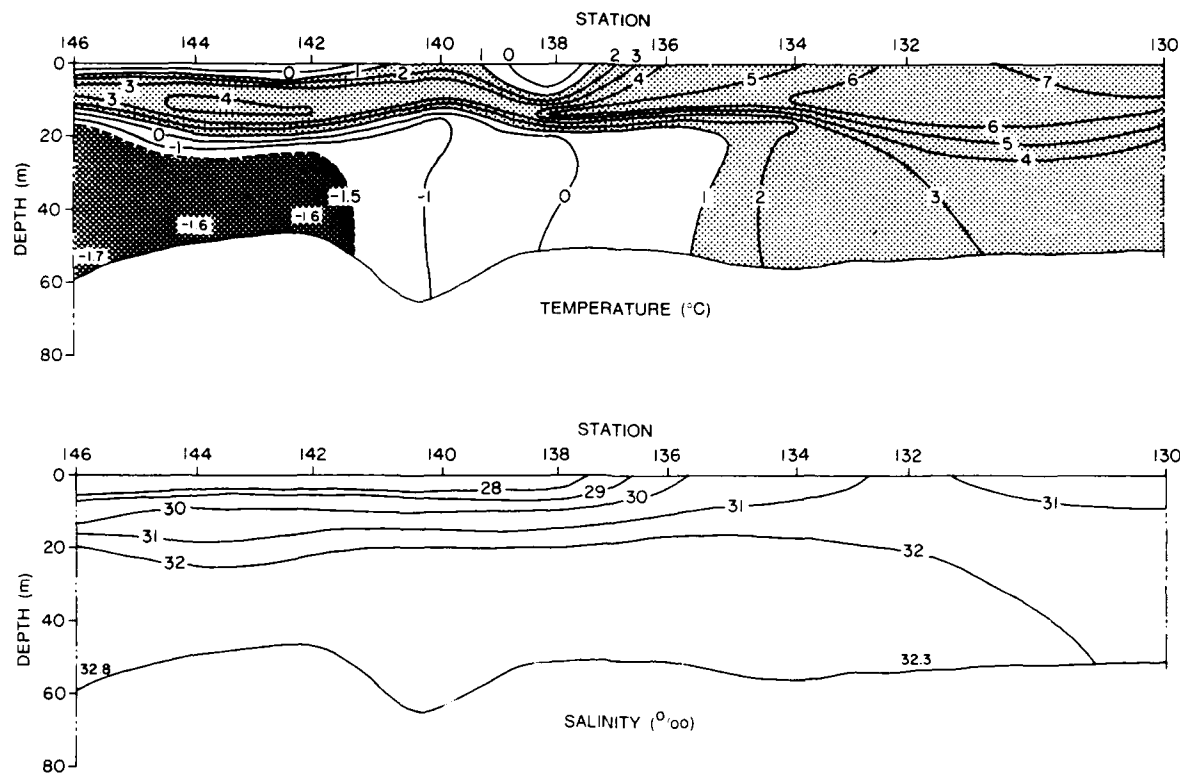


Figure 43. Line K cross sections showing temperature and salinity.

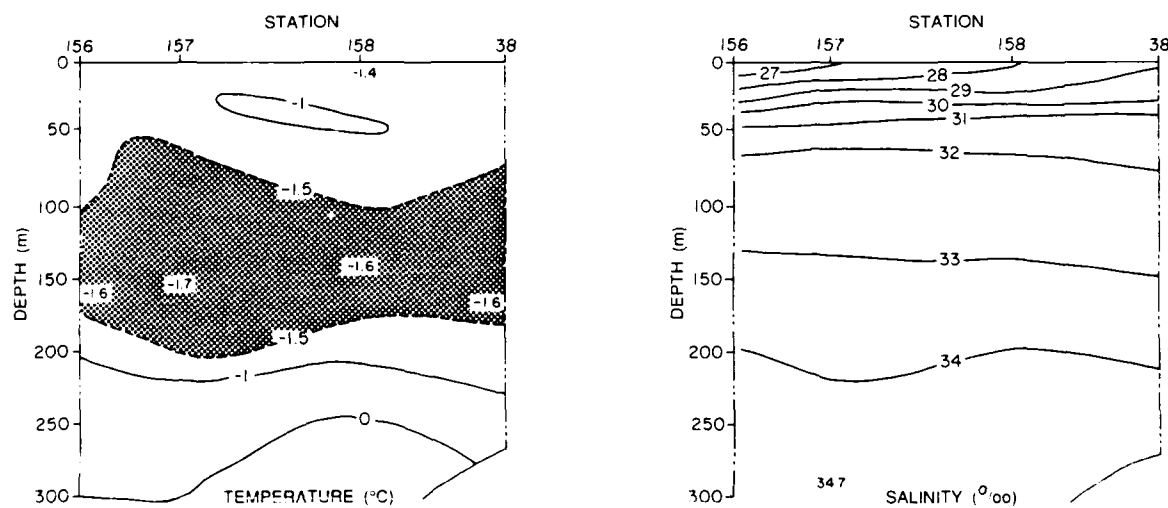


Figure 44. Line L cross sections showing temperature and salinity.

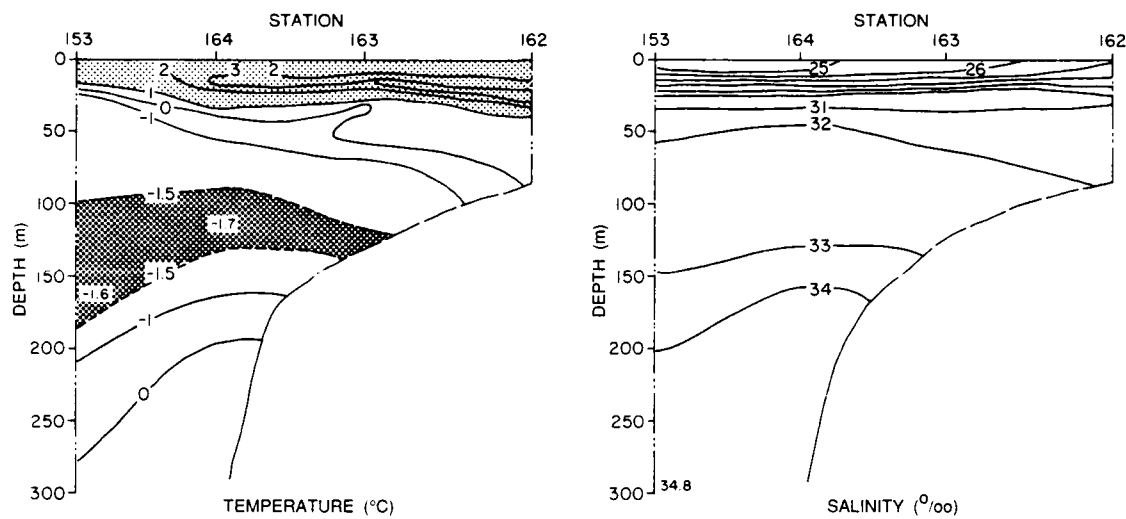


Figure 45. Line M cross sections showing temperature and salinity.

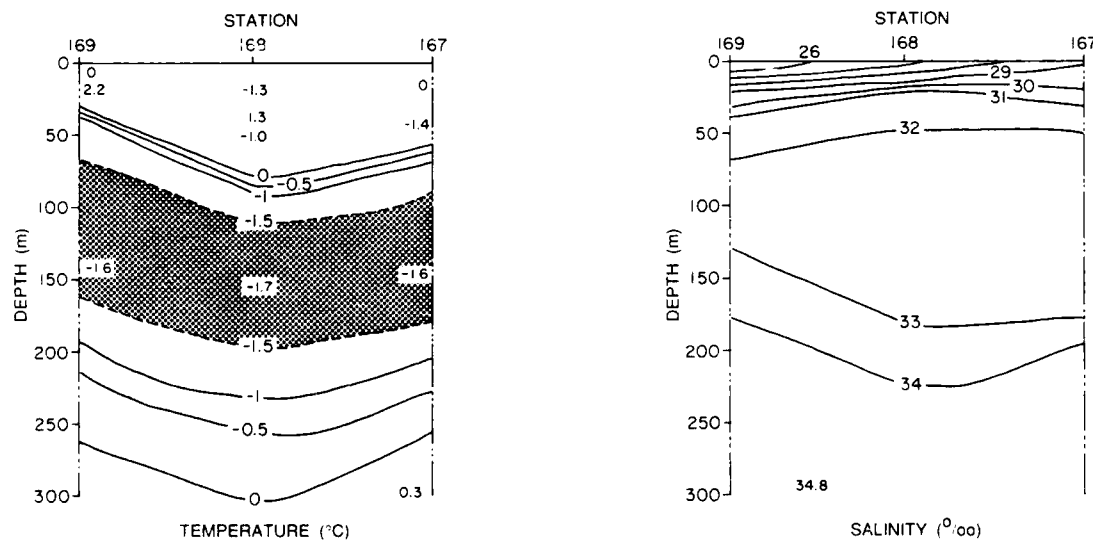


Figure 46. Line N cross sections showing temperature and salinity.

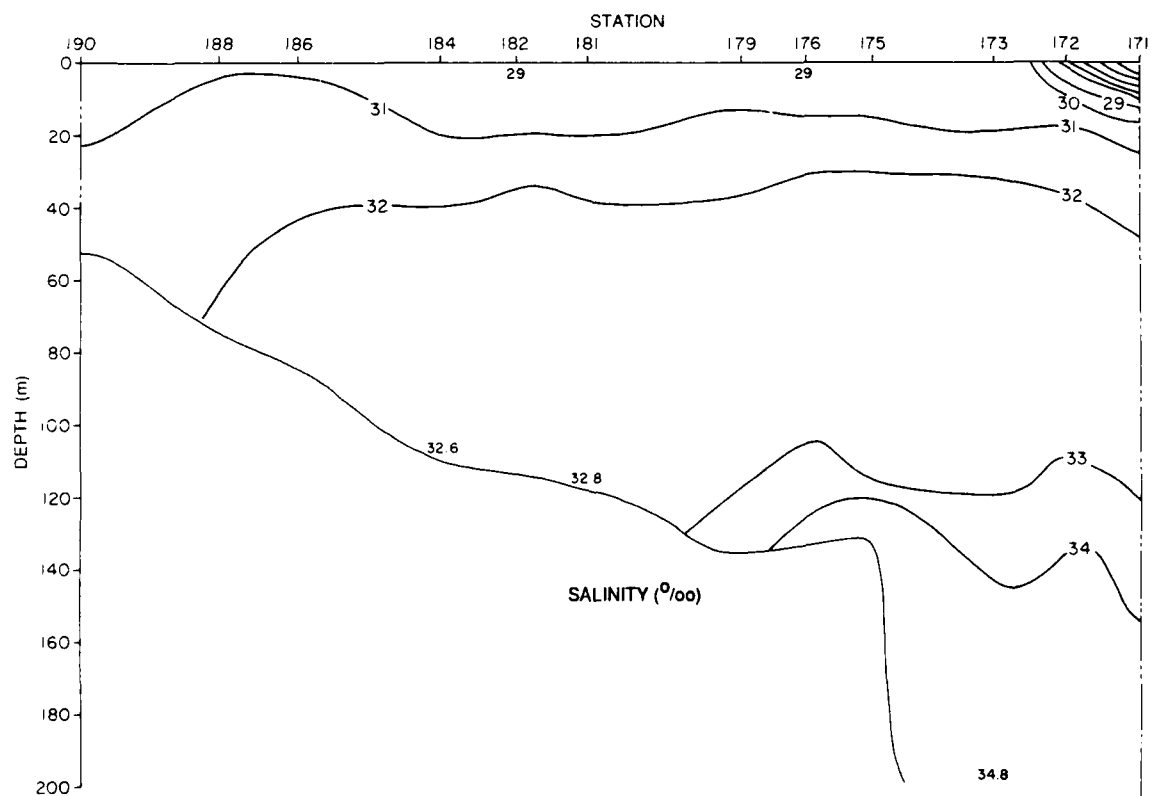
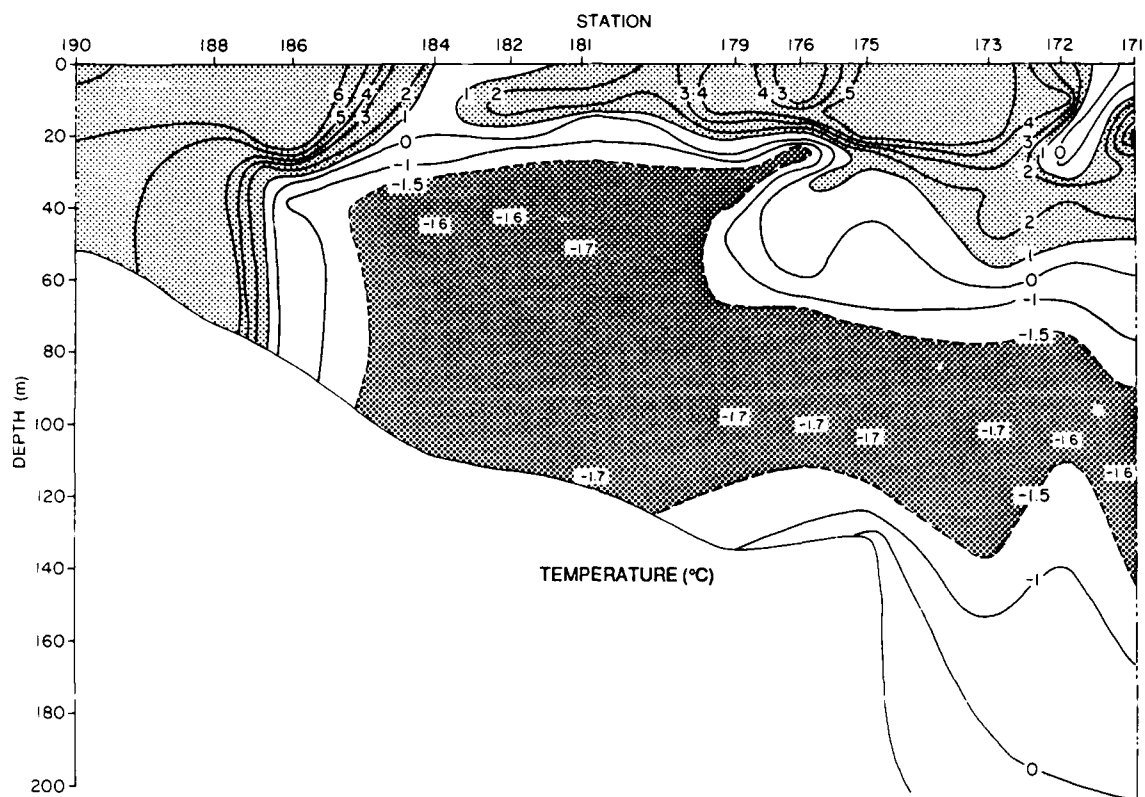


Figure 47. Line O cross sections showing temperature and salinity.

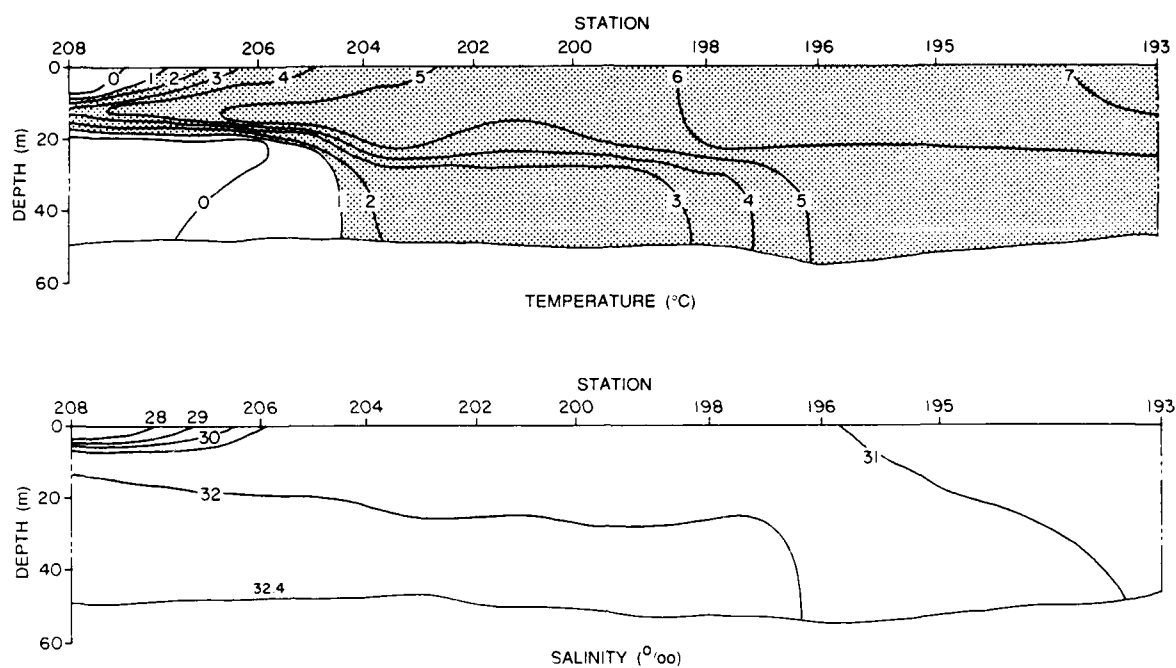


Figure 48. Line P cross sections showing temperature and salinity.

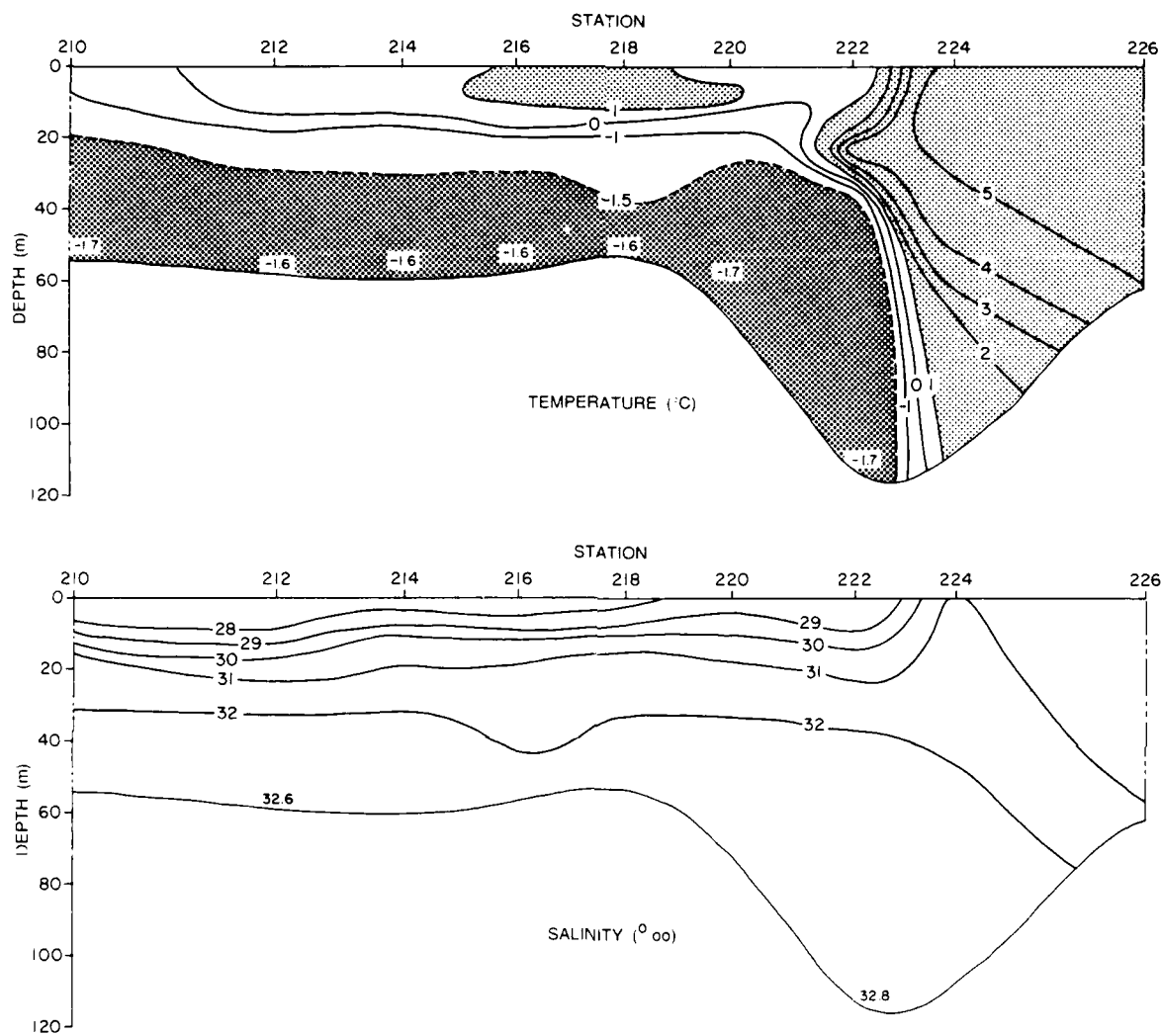


Figure 49. Line Q cross sections showing temperature and salinity.

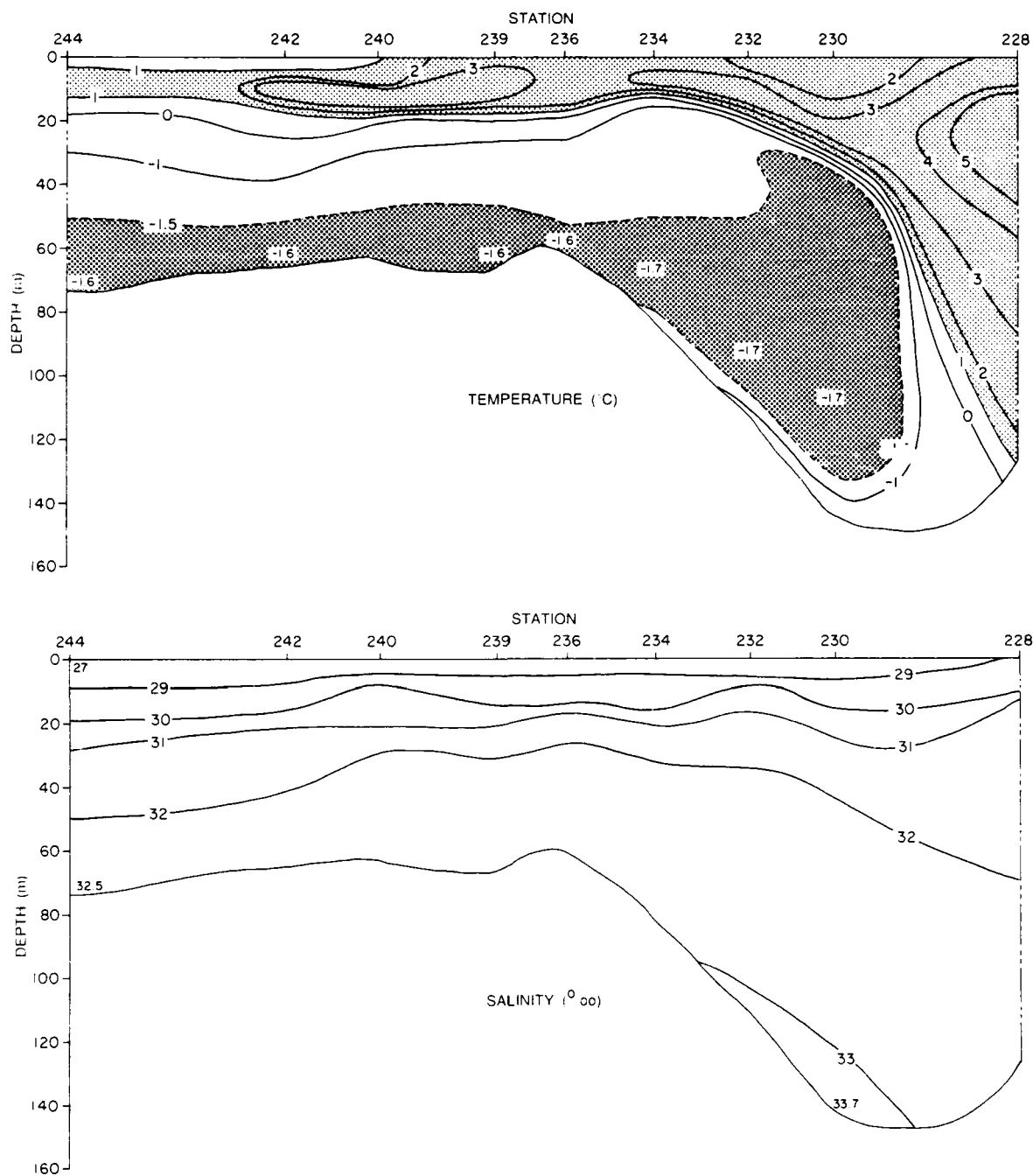


Figure 50. Line R cross sections showing temperature and salinity.

The maximum temperature at each station is shown in Figures 52 and 53. The minimum temperature at each station is shown in Figures 54 and 55.

Stations with a maximum temperature exceeding 1°C are shown in Figure 56. Expanded views of stations with water $>1^{\circ}\text{C}$ in the two Barrow Canyon surveys are shown in Figure 57. Also plotted on each figure is the ice cover near the time of the CTD measurements. The warm water plot can be extended shoreward by using the satellite image for 25 August (Figure 10); of course, this is surface temperature only, as indicated by IR emission. Based on the satellite data, the warm intrusion appears to progress around Pt. Barrow and follow the coast to Cape Halkett.

The extent of the cold bottom layer ($<-1.5^{\circ}\text{C}$) is shown in Figures 58 and 59. Nearly all stations have such cold water. In Section X, we will repeat these figures for lower thresholds.

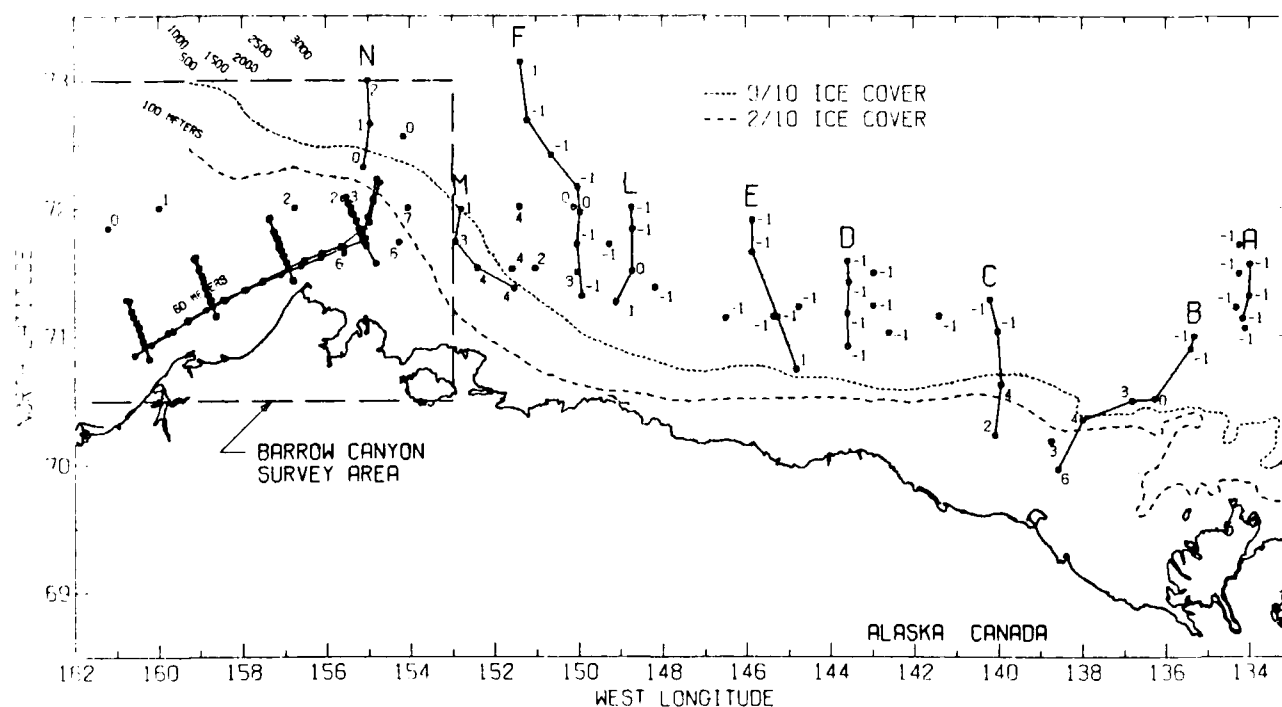


Figure 52. Maximum temperature ($^{\circ}\text{C}$) for each CTD station. For the Barrow Canyon area, see Figure 53.

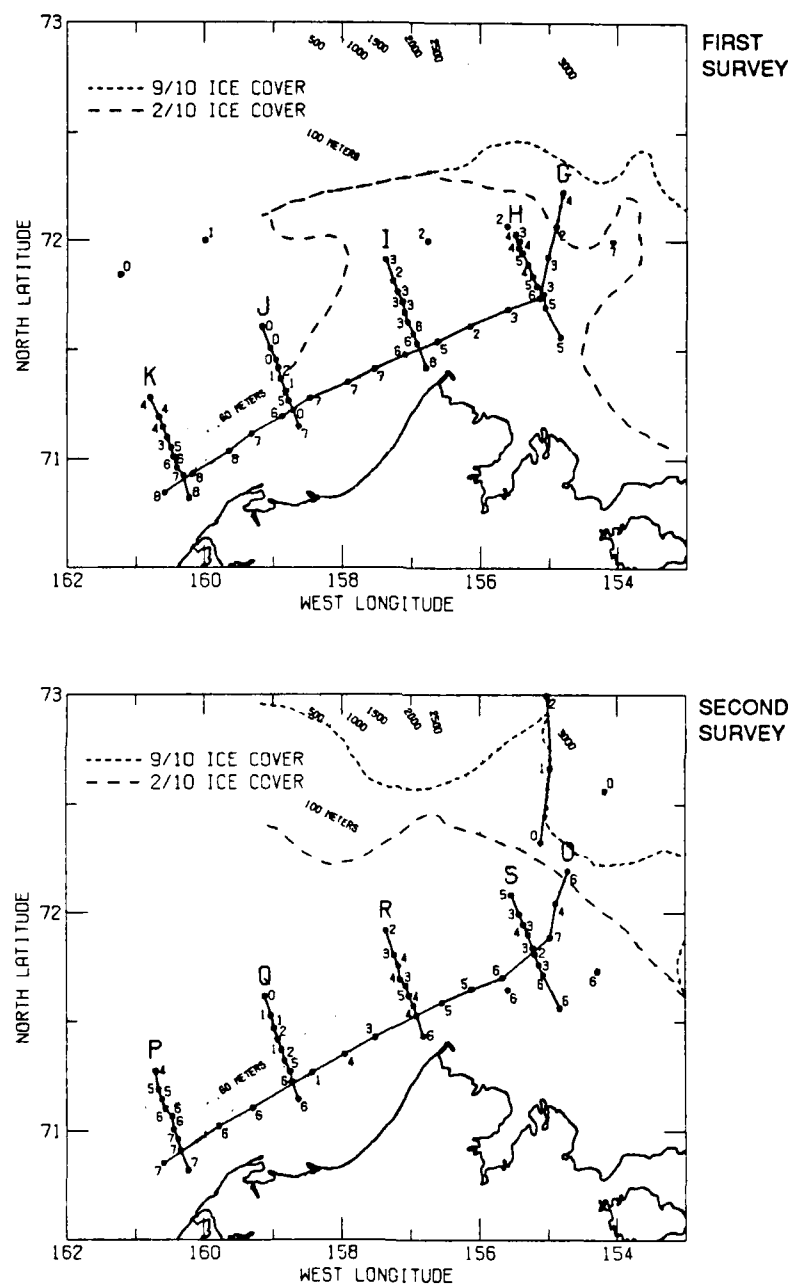


Figure 53. Maximum temperature ($^{\circ}\text{C}$) for each CTD station in the two Barrow Canyon surveys.

APL-UW 8705 63

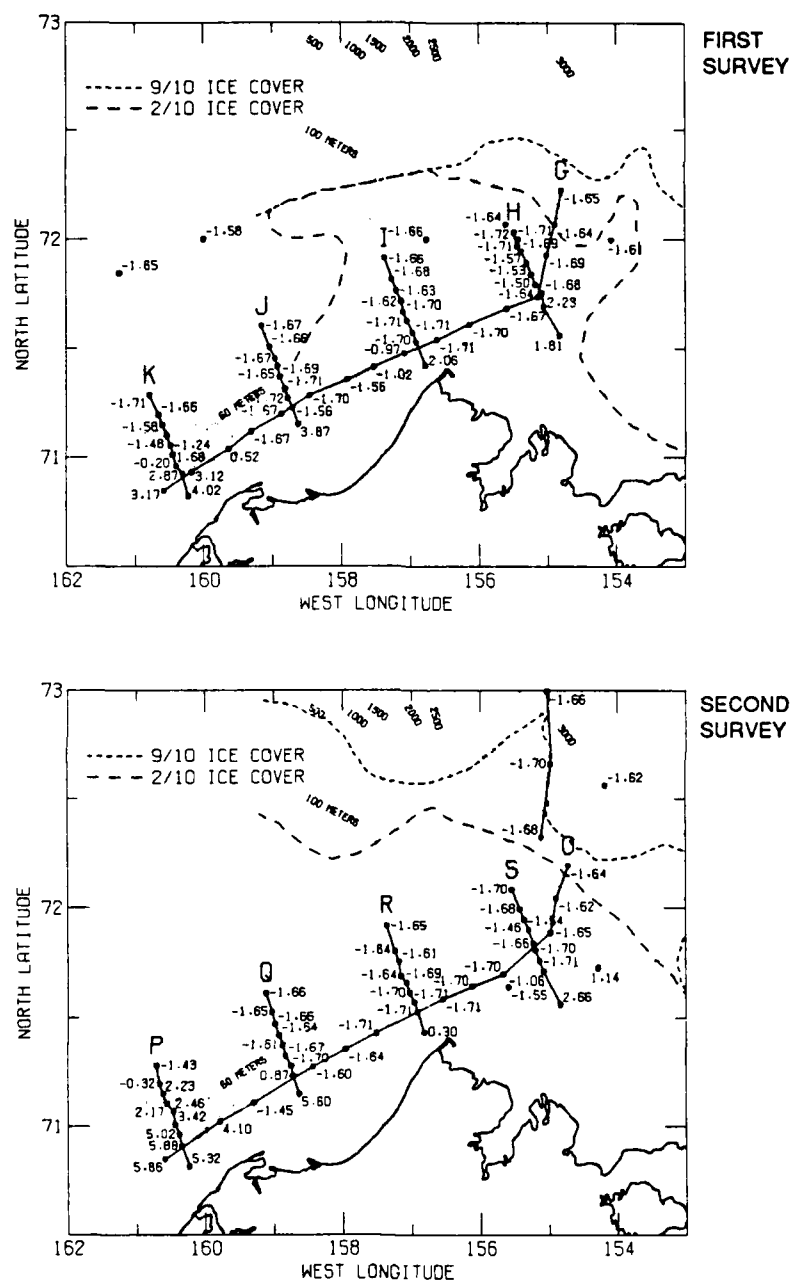


Figure 55. Minimum temperature ($^{\circ}\text{C}$) for each CTD station in the two Barrow Canyon surveys.

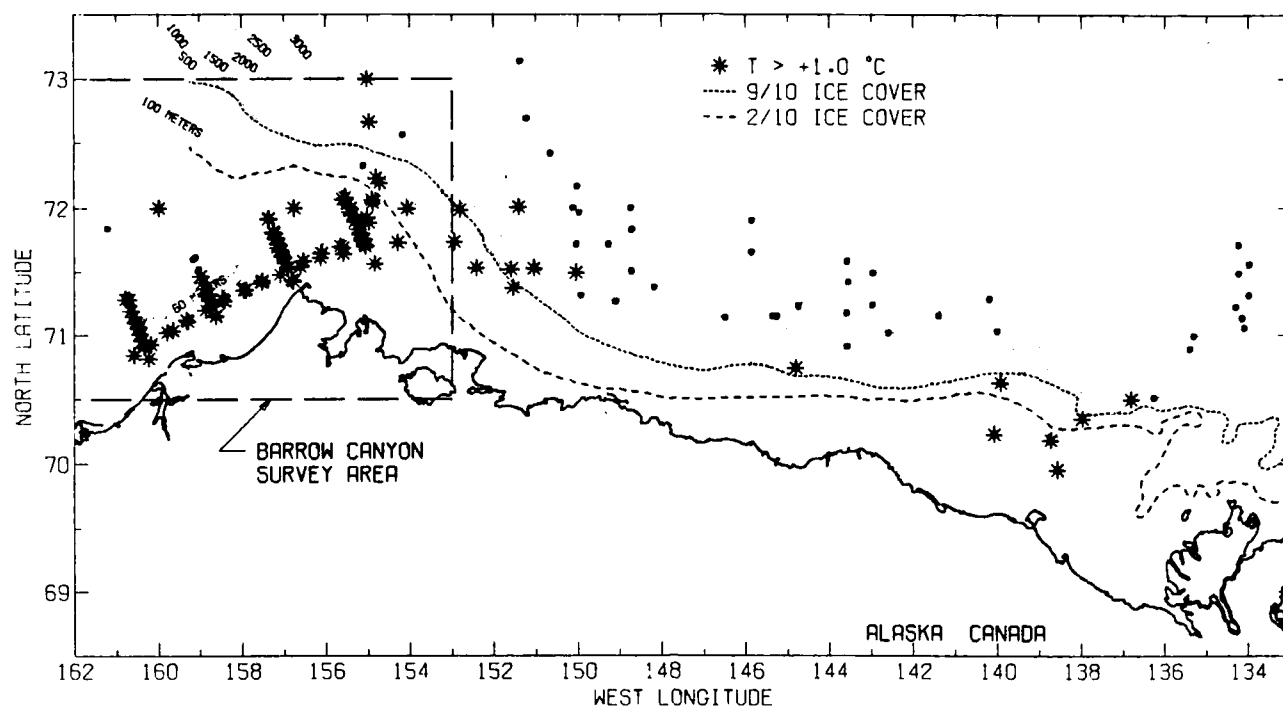


Figure 56. Stations with maximum temperature exceeding 1°C .

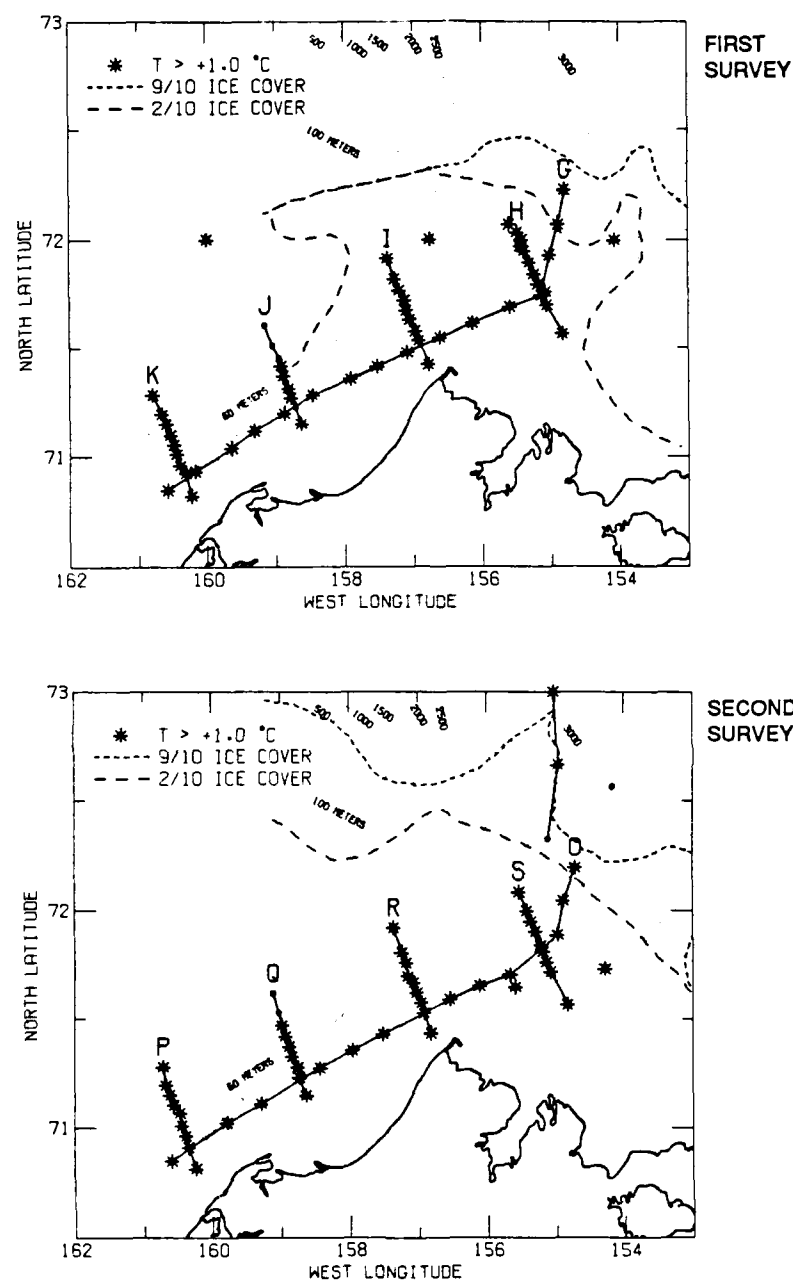


Figure 57. Stations with maximum temperature exceeding 1°C in the two Barrow Canyon surveys.

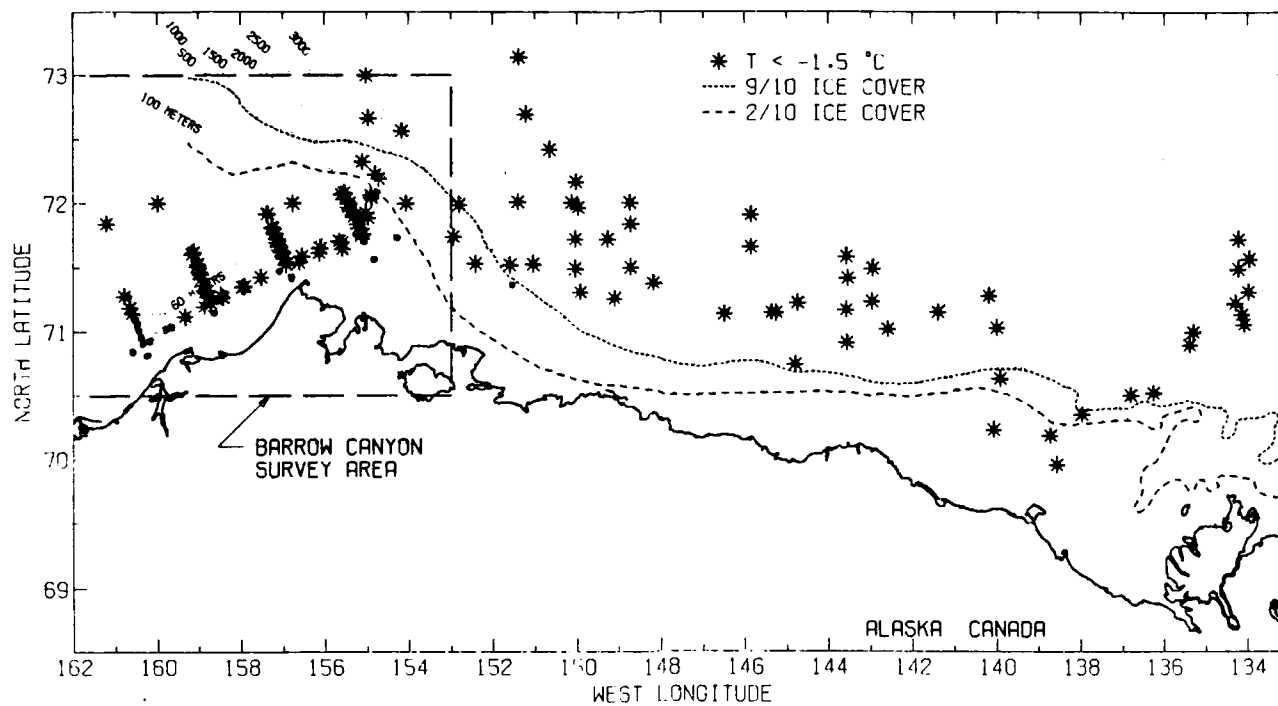


Figure 58. Stations with minimum temperature $< -1.5^{\circ}\text{C}$.

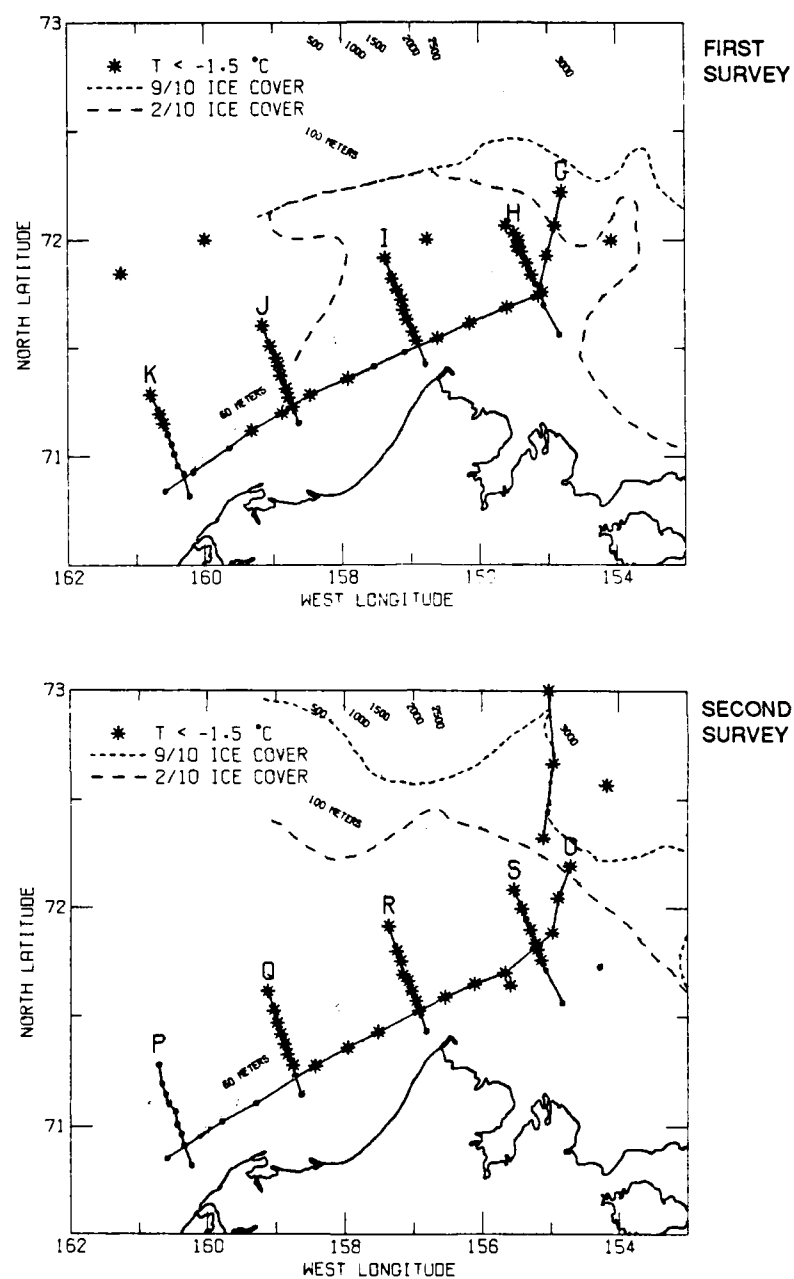


Figure 59. Stations with minimum temperature $< -1.5^{\circ}\text{C}$ in the two Barrow Canyon surveys.

IX. SURFACE CONDITIONS

The changes in water properties at the surface are a good indicator of water movements if the depth of the surface layer is known. Surface layer conditions can indicate river runoff even if there has been considerable mixing with the existing water.

A. Surface Properties, 1985

The surface temperature readings recorded by the profilers may be inaccurate because of the disturbance created when the ship comes to a stop, although careful ship handling that allows some forward motion at the last minute can result in an undisturbed surface layer. Ignoring fluctuations, we have plotted the first steady surface temperatures for all stations in Figures 60 and 61. The warm coastal current and the Mackenzie River runoff are indicated by temperatures $>1^{\circ}\text{C}$.

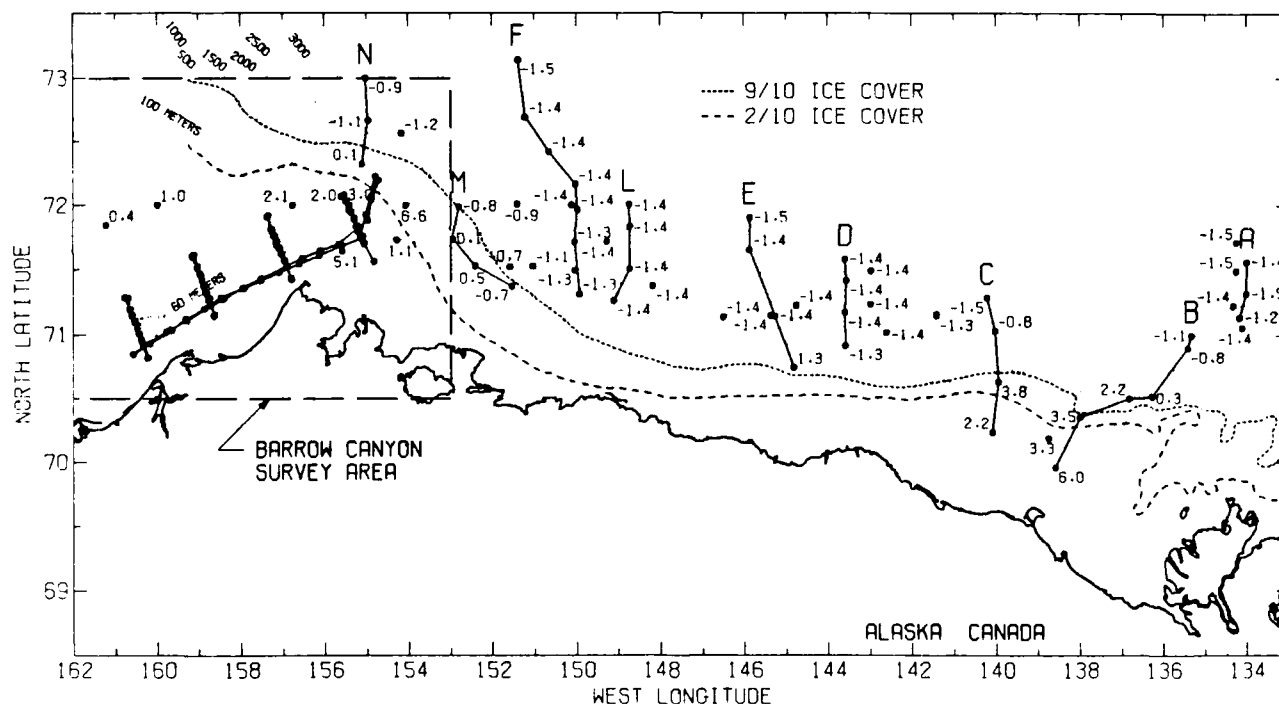


Figure 60. Surface layer temperatures ($^{\circ}\text{C}$) from the CTD profiles. For the Barrow Canyon area, see Figure 61.

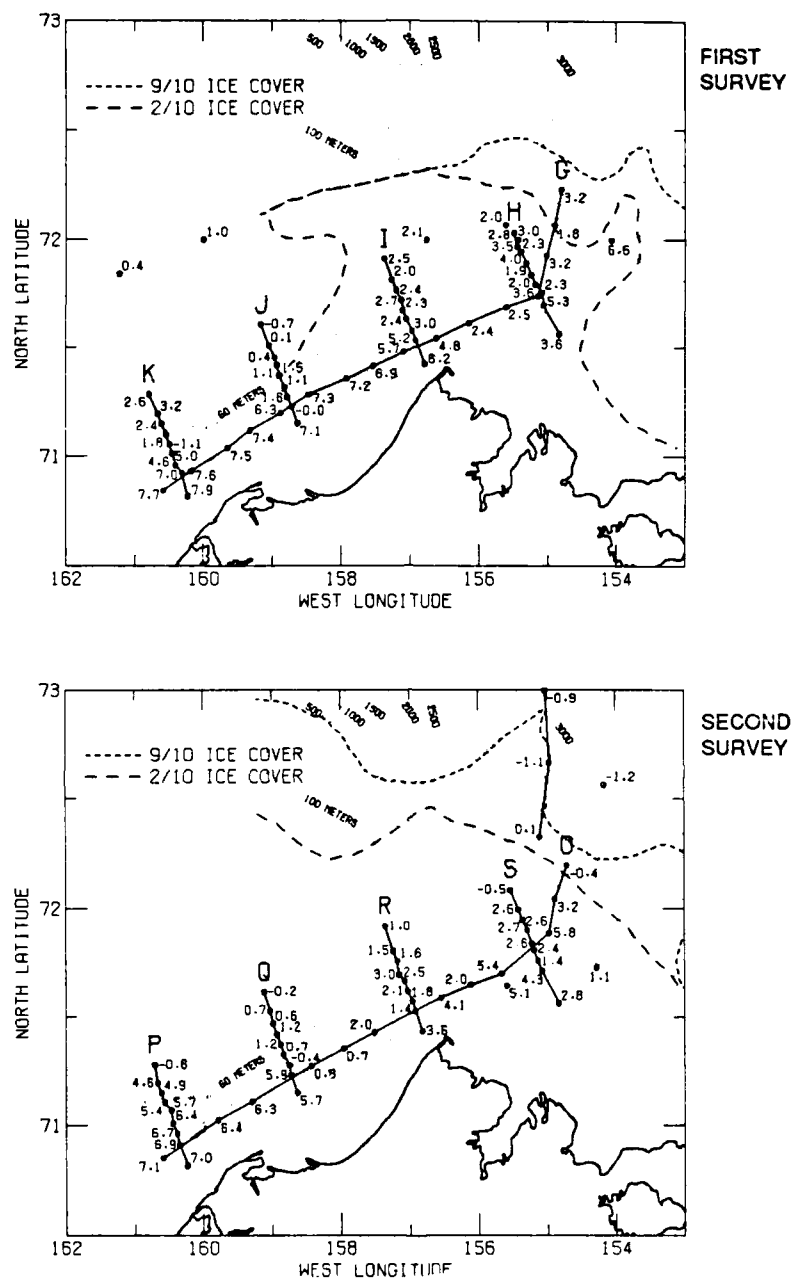


Figure 61. Surface layer temperatures ($^{\circ}\text{C}$) from the CTD profiles for the two Barrow Canyon surveys.

The surface salinity readings may show a thin layer of low salinity due to melting ice. We consider here only surface layers at least 3 m thick, since this amount of low-salinity water should indicate river runoff. Figure 62 indicates the surface salinity at each station. The low salinities in the eastern portion show the effect of the Mackenzie River. The low values near section M may indicate that other rivers have contributed along the coastline. Figure 63 shows surface salinities for the Barrow Canyon area. The coastal current, which crowds along the coast, has a higher salinity, and this salinity increases for the second survey.

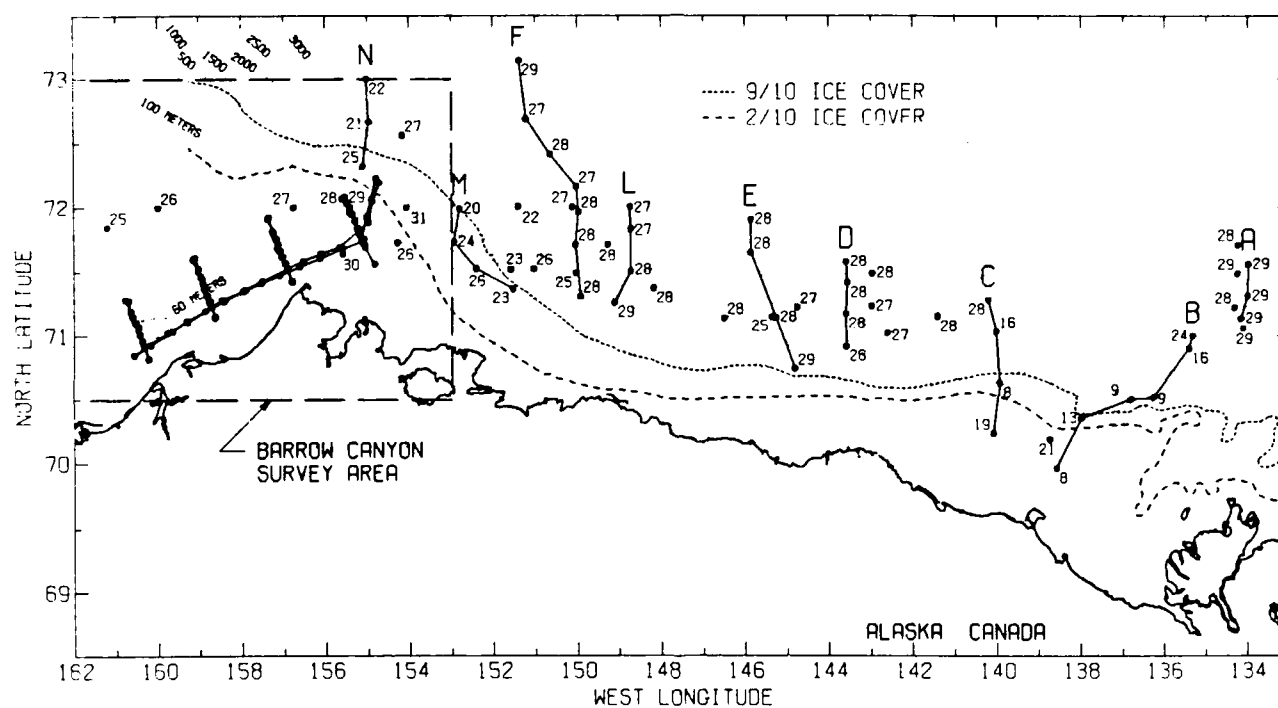


Figure 62. Surface layer salinities (‰) from the CTD profiles. For the Barrow Canyon area, see Figure 63.

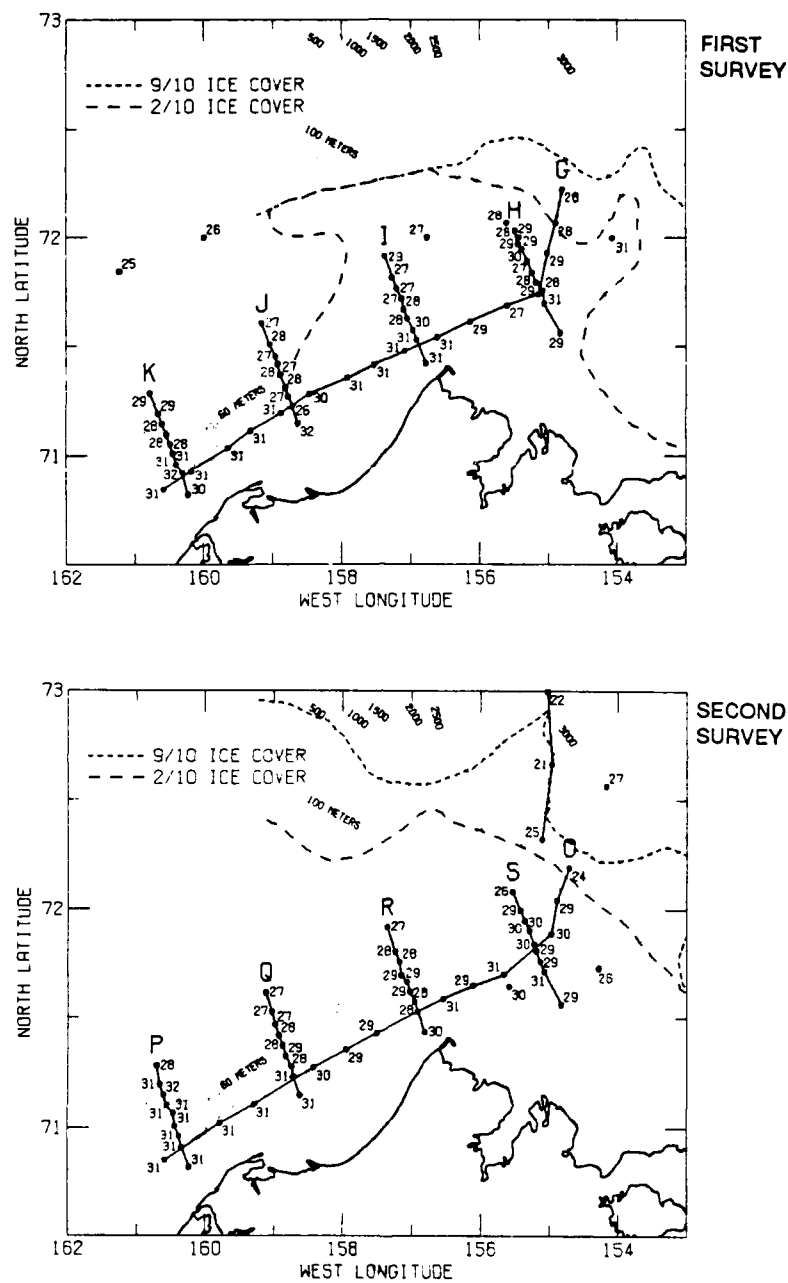


Figure 63. Surface layer salinities (‰) from the CTD profiles for the two Barrow Canyon surveys.

B. Other Cruises in Past Years

Data from other cruises were examined, and the surface temperatures and salinities extracted and plotted for comparison with the 1985 data. Plots for the following cruises, by ship name, appear in Appendix C. There are large differences from year to year. Some of this variation may be due to the method of measuring surface temperature and salinity.

Figure	Cruise	Year
C-1	<i>Burton Island</i>	1950
C-2	<i>Burton Island</i>	1951
C-3	<i>Atka</i>	1957
C-4	<i>Staten Island</i>	1959
C-5	<i>Glacier, Natchik</i>	1972 (S only)

C. Satellite IR Patterns

A comparison of the surface temperatures obtained from the CTD profiles (Figures 60 and 61) with those interpreted from satellite IR measurements shows fair agreement. The IR results could represent a much thinner layer, but the agreement shown here indicates that there were no thin temperature layers.

The IR images in Figures 8–10 demonstrate the temperature pattern along the coast. The considerable amounts of warm water between Pt. Barrow and Cape Halkett appear to be related to the coastal current's deposit of warm water in a long plume past Pt. Barrow. The warm coastal water east of Barter Island appears to be related to the Mackenzie River outflow. The warm areas shown along the coast in the satellite images do not extend as far seaward as the closest CTD stations; therefore this warm water was not seen in the CTD profiles.

X. ANALYSIS OF WATER EXCHANGE

Several means are at our disposal for studying and understanding the water movements prior to and during the survey. Previous oceanographic studies^{5,17} of the Barrow Canyon area are helpful in identifying and tracing water types. Some of the changes taking place in the Barrow Canyon area can be analyzed by comparing the two cross sections taken 10 days apart. Interpretation of the surface layers observed by the CTD stations can be augmented by the IR satellite images. The Mackenzie River outflow is observed as a surface layer in the temperature and salinity profiles as well as in the IR images.

A. Atlantic Water

The Atlantic Water is a permanent feature of the western Arctic Ocean; it usually occurs at 200–900 m depth and is marked by $T > -1^{\circ}\text{C}$ and $S > 34\text{‰}$. Measurements in 1976 off the lower end of the Barrow Canyon showed some displacement of the upper traces of this water (which are at -1.5 to -1.0°C as a result of mixing) from 150 m to 190 m due to the movement of low-temperature, high-salinity water down the canyon (discussed in the next paragraph). The other water types discussed here are lighter and tend to remain above the Atlantic Water.

B. Chukchi Bottom Layer

A cold, high-salinity bottom layer was traced from the Chukchi Sea down the Barrow Canyon in previous studies.^{16,17} This water moves slowly down the canyon during the spring; thus we found considerable amounts of it in August, as shown in the temperature sections. This water is being forced seaward by the incoming coastal flow from the south. This year, the Chukchi bottom water was at $T = -1.7^{\circ}\text{C}$ and $S = 32.7\text{‰}$. An outline of this uniform water mass is shown in Figure 64 for the two Barrow Canyon surveys. These figures were obtained from the G' and O longitudinal sections. Transverse section S shows that this is about the extent of the bottom water's travel except possibly more to seaward. Comparisons of transverse sections R and S with sections I and H show this water diminished during the 10-day interval.

A plan view of the extent of the cold bottom layer is shown in Figures 65 and 66 for two thresholds, $T < -1.6^{\circ}\text{C}$ and $T < -1.7^{\circ}\text{C}$. It appears as far east as 149°W longitude. Station 33 at 145°W longitude may also contain a trace of this water at -1.69°C . The appearance of this water at station 33 would extend the eastern boundary, but water this cold is not necessarily Chukchi bottom water. Instead, it may be caused by winter freezing in the adjacent shallows and subsequent drainage of the resulting cold, saline water to lower depths — the same process responsible for the formation of the Chukchi bottom layer.

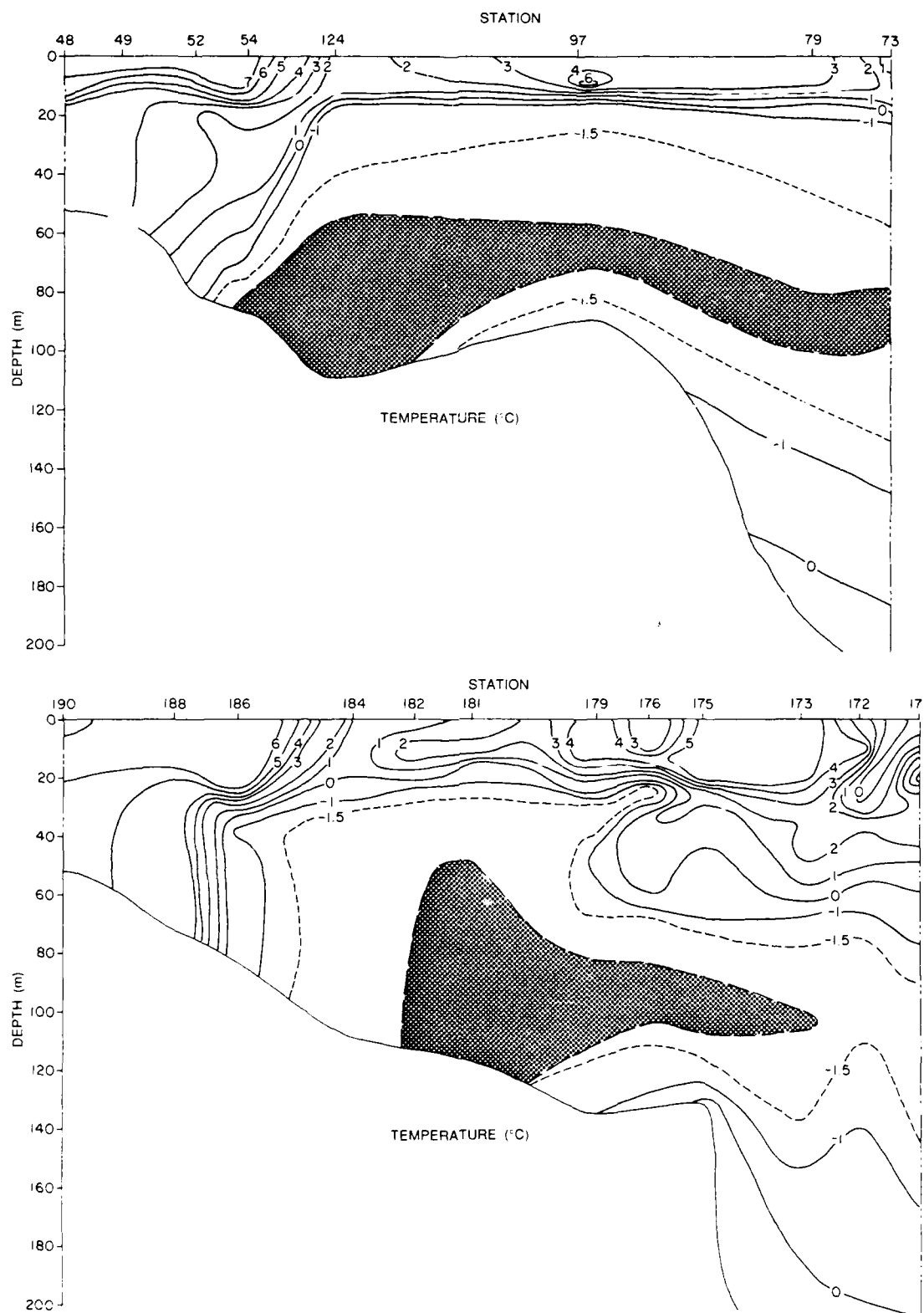


Figure 64. Chukchi Sea bottom water with constant properties ($T = -1.7^{\circ}\text{C}$, $S = 32.7\text{‰}$) for the two Barrow Canyon surveys.

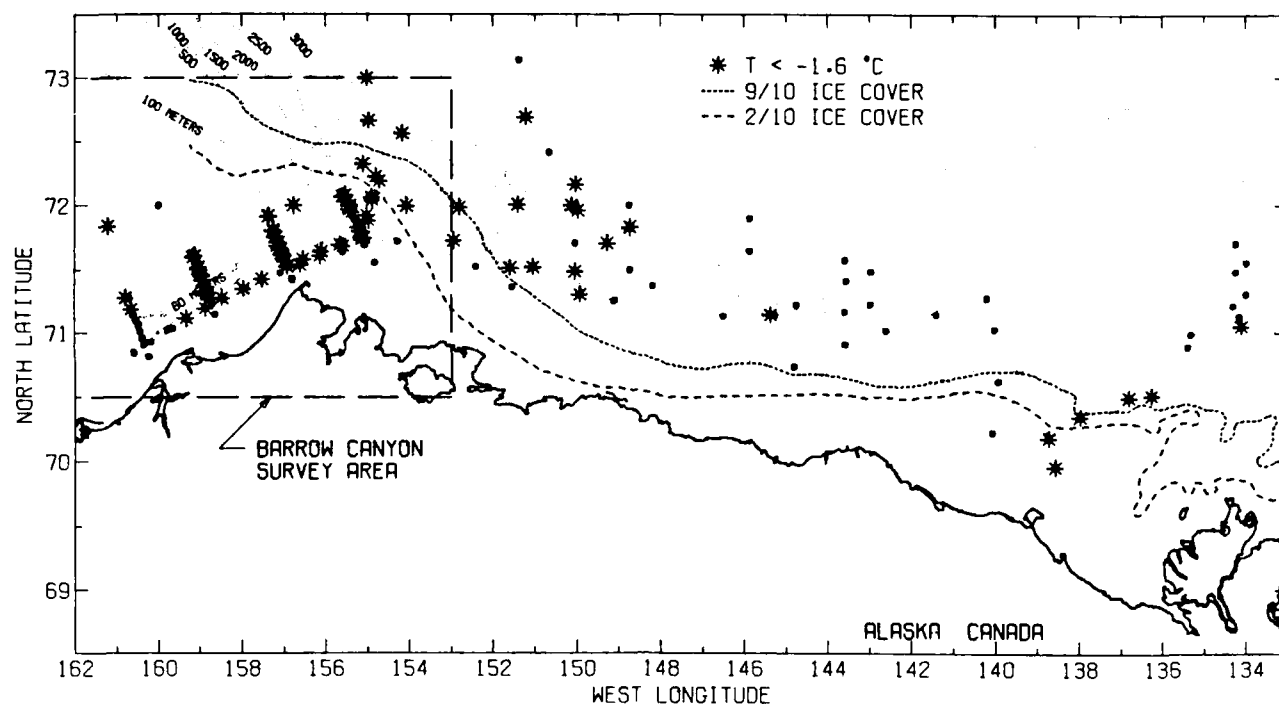


Figure 65. Extent of the Chukchi bottom water when defined as $T < -1.6^{\circ}\text{C}$. Dashed lines show the ice cover at the times of the CTD profiles, and are a composite of Figures 15–21 which show the change in coverage over the course of the measurements.

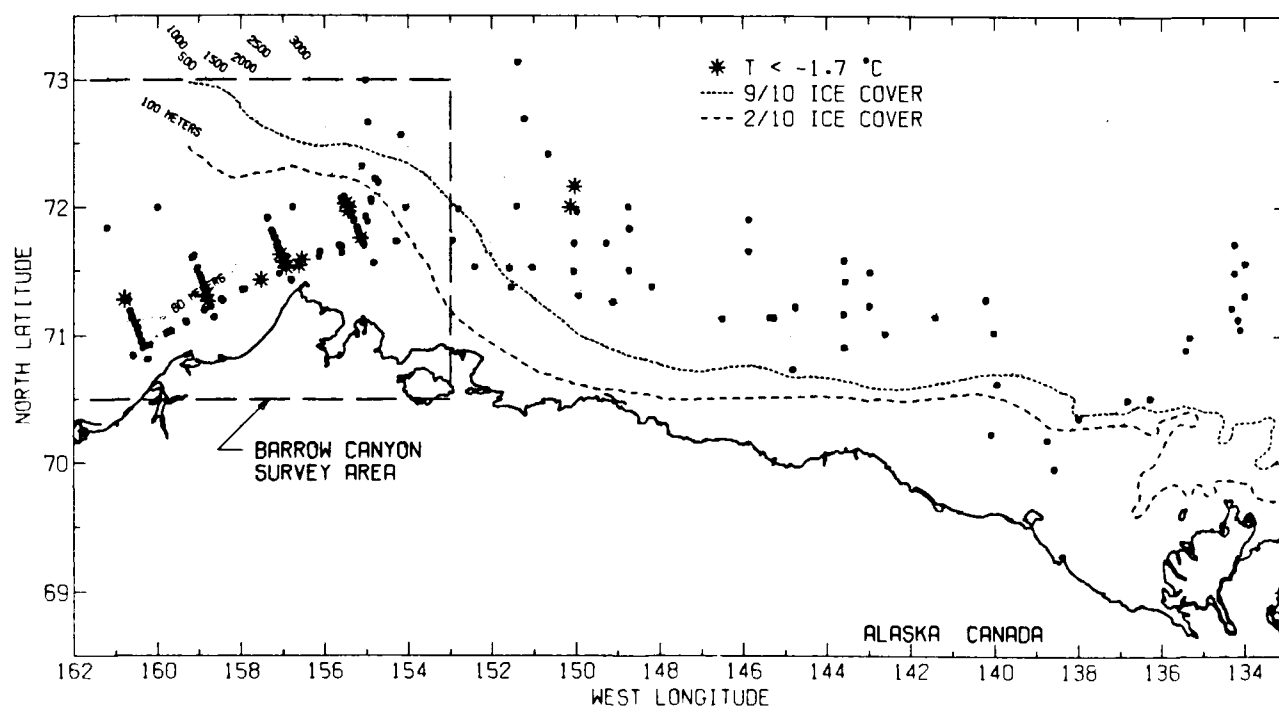


Figure 66. Extent of coldest Chukchi bottom water ($T < -1.7^{\circ}\text{C}$).

Similar plots are shown for both surveys of the Barrow Canyon area in Figures 67 and 68. In the plots for $T < -1.7^{\circ}\text{C}$, the core of the drainage lies along the trough of the canyon. A comparison of the two surveys shows this water has moved down the canyon during the 10-day interval. Such flow may be intermittent.

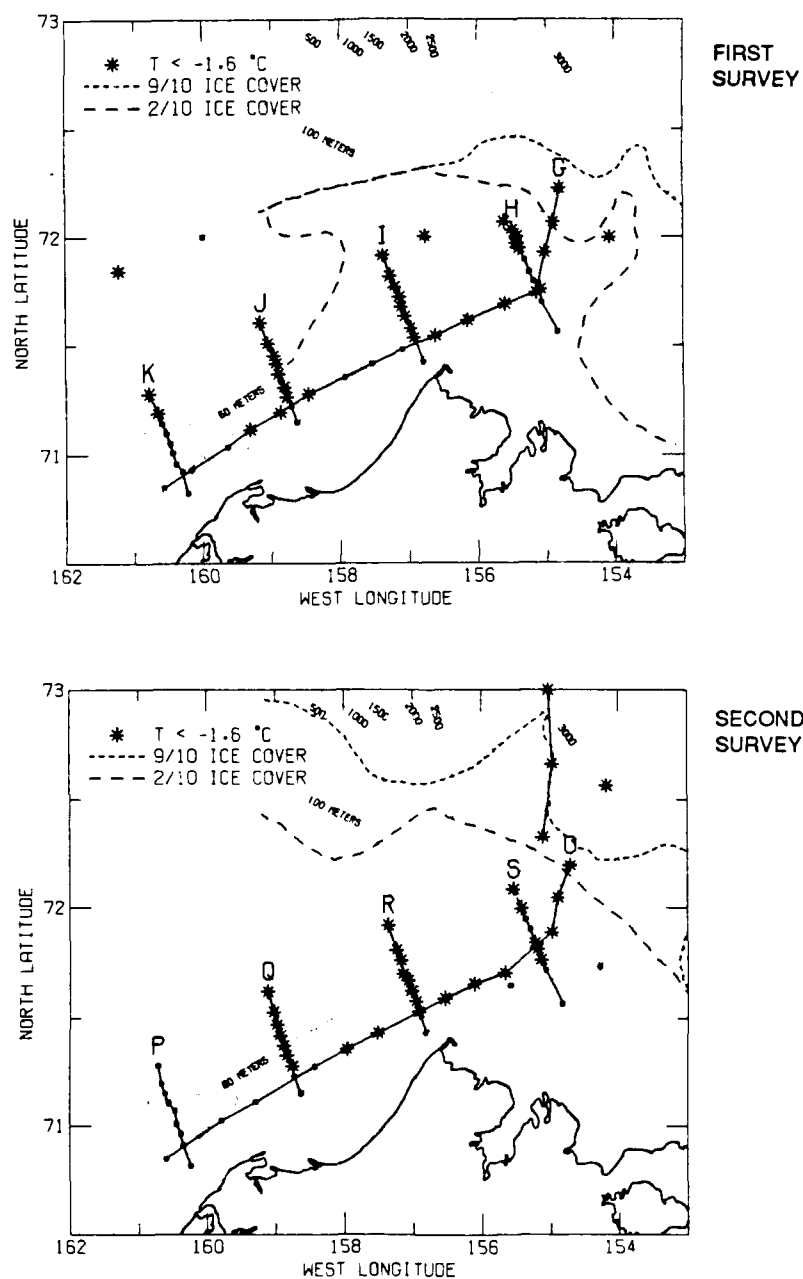


Figure 67. Extent of Chukchi bottom water ($T < -1.6^{\circ}\text{C}$) for the two Barrow Canyon surveys.

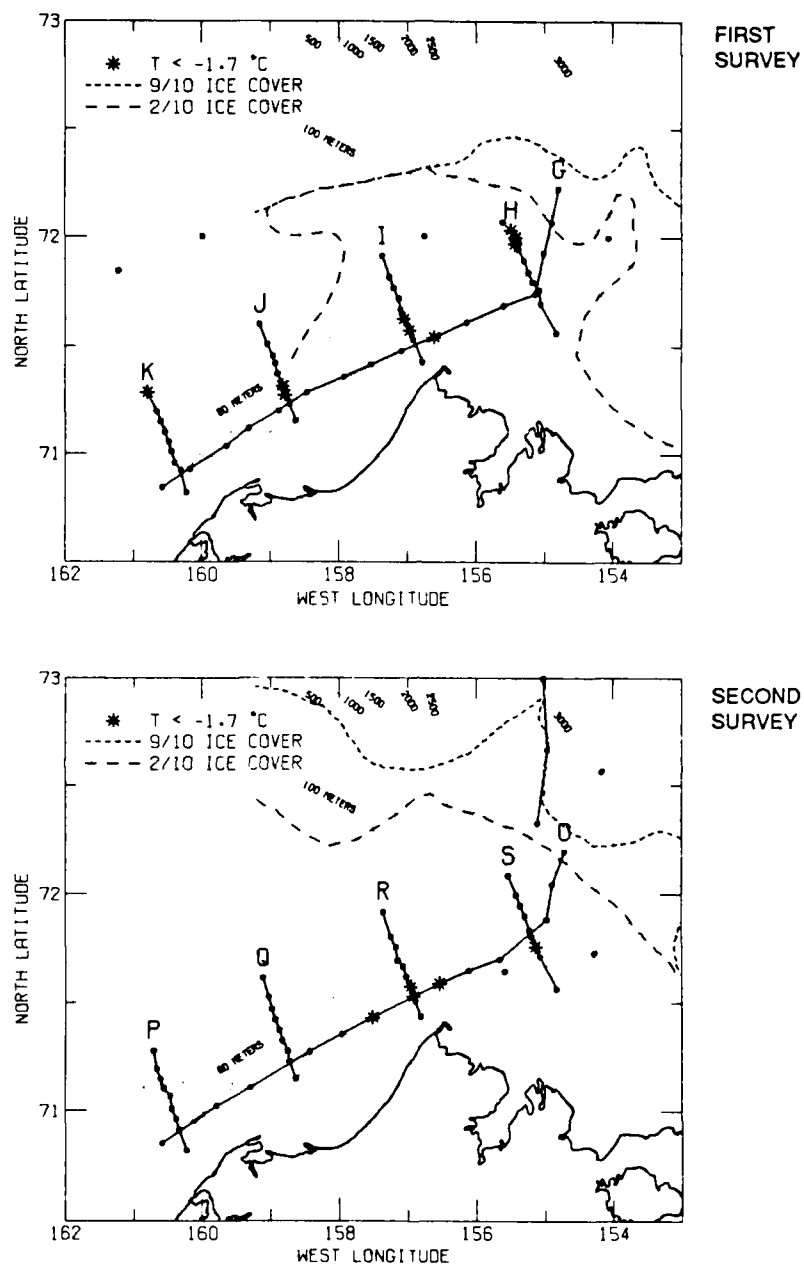


Figure 68. Extent of the coldest Chukchi bottom water ($T < -1.7^{\circ}\text{C}$) for the two Barrow Canyon surveys.

C. Coastal Flow from the South

The Alaskan Coastal Current has been studied extensively.^{4,6,7} Aagaard¹⁸ and Mountain et al.⁵ refer to two main components: Bering Sea water and Alaskan coastal water. Whereas Bering Sea water comes from well below the surface in the Bering Sea, the coastal water is near-surface water that has been warmed in shallow areas both north and south of Bering Strait, especially in Norton Sound and Kotzebue Sound, and has subsequently been carried northward and along the coast past Pt. Hope. Two distinct examples of coastal water are apparent at stations 48 and 190, the southernmost stations that were occupied. Each appears as a uniform water mass, with a sharp gradient between (see Figure 69). As these waters move northward, they crowd the coast because of the Coriolis force and displace the existing water seaward, as shown in Figures 40–43 and 48–51. Figures 41 and 51 show that some of the incoming Bering Sea water has sufficient salinity (and therefore density) to intrude as deep as 140 m, thus merging into Atlantic Water of the same temperature and salinity.

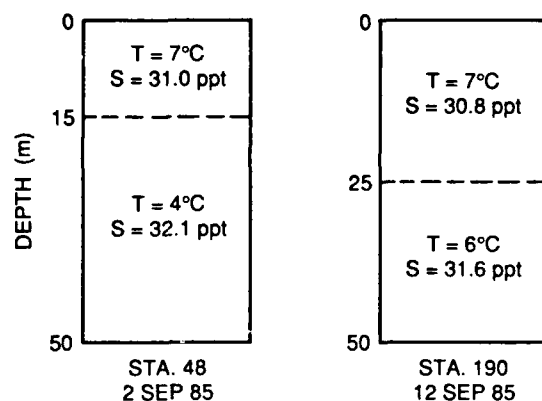


Figure 69.
Distinct layers of water entering the survey area along the coast from the southwest.

The horizontal extent of this warm coastal water is shown in Figure 56. Close examination of the profiles shows that the layer of coastal water is observable as far east as 148°W longitude. Additional information on the presence of Alaskan coastal water along the coast east of Pt. Barrow can be obtained from satellite imagery (Figures 8–10). Considerable surface warmth from the coastal current appears as far east as Cape Halkett. The warm water farther east is probably caused by solar warming in the shallows.

Observations of the warm layers farther to the north in prior years indicate that the warm water deposited in the Beaufort Sea spreads out over many miles before it is cooled or mixed thoroughly. Distinct layers of 0°C water were observed¹¹ in October 1984 at depths of 30–40 m at 73°20'N latitude. A short time later these layers disappeared, giving the impression that the observations were made near their northerly limit. In 1980, 40-m-thick layers of 2°C water were found at 72°04'N, 155°W. The maximum temperature of the layer remained above 0°C as the survey progressed northward to 72°50' latitude.

The remnant of this warm water has become a permanent feature of the western Arctic and has been discussed by Coachman and Barnes⁷ who called it a "shallow temperature maximum" layer. It is described as being at 75–100 m depth, which could be the remnant of the layers observed by APL after the shallower portion has been cooled from above.

The presence of the coastal current at 148°W longitude is not surprising in light of the calculation by Mountain et al.⁵ that the momentum of the current passing Pt. Barrow would carry it to 140°W longitude.

There have been observations of ice apparently being drawn into the coastal current north of Wainwright. This might be a partial recirculation of the coastal current after it passes Pt. Barrow, first northward, then westward in the fringe of the Beaufort Gyre, and finally returning to the coastal current near Wainwright. This agrees with a barotropic model formulated by Budgell.¹⁹

D. Mackenzie River Water

Mackenzie River water can be detected by its higher temperature and its low salinity. Figure 52 shows a large area with CTD maximum temperatures greater than 0°C. This area extends from 136°W to 141°W. Figure 60 shows surface temperatures to a greater accuracy with the same result.

Additional information on the distribution of the warm river water can be seen in the satellite IR images, Figures 8, 10, and 11. In Figures 8 and 11 for 5 August, the outflow occupies a blunt, broad area off the wide river delta. There is no indication in section B (Figure 33) of the warm area shown farther out, possibly because section B was taken 2 weeks later or because the warm water was beneath the ice cover as shown in Figure 60. Later, on 25 August, as shown in Figure 10, a warm plume appears to extend almost as far west as Barter Island. The core temperature appears as high as it is off Pt. Barrow, 4–5°C.

Figure 63 shows low surface salinities over a slightly broader area, 135–141°W longitude.

The existence of warm temperatures about 150 km off the coast north of the Mackenzie River, and low salinities at about 220 km, indicates the presence of river water. This warm water would be expected to cause deterioration in the ice. At times, easterly winds move the ice eastward from Banks Island, and the resulting open area allows the spread of river water northward. Penetration into the pack then causes "rotting" of the ice. Such deterioration was observed in the fall of 1984,¹¹ when the large floe that was initially selected as a camp site broke into several pieces before we reached it. The search was then redirected to the northwest, where more solid floes were found.

E. Water Types Seen in the TS Diagrams

Individual TS diagrams for many of the profiles are shown in Appendix B. Composite diagrams for several stations in the Barrow Canyon area, the central region, and the eastern portion are shown in Figures 70–73. Heavy concentrations of dots in the plots indicate the presence of some of the water masses discussed above. For ease of comparison, Figure 74 shows where the various water types would be positioned on the TS

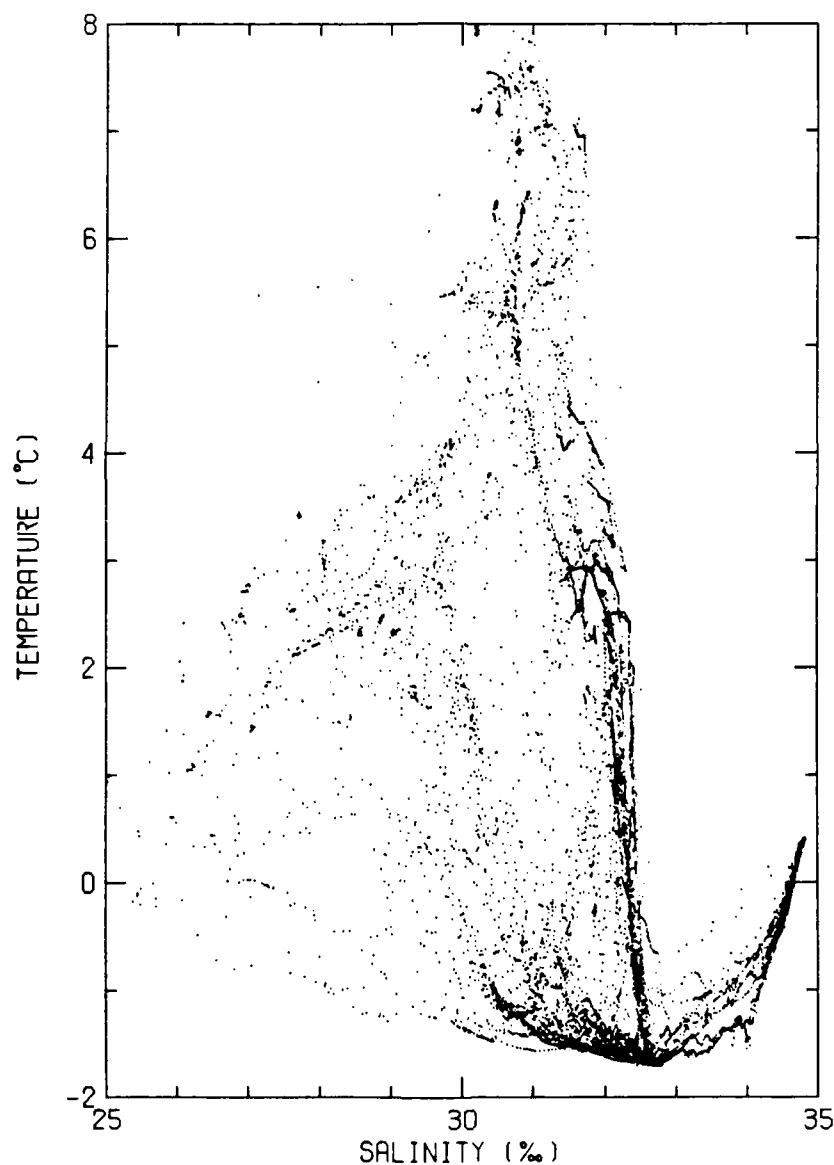


Figure 70. Composite TS diagram for the first Barrow Canyon survey, stations 47–147 (APL stations only).

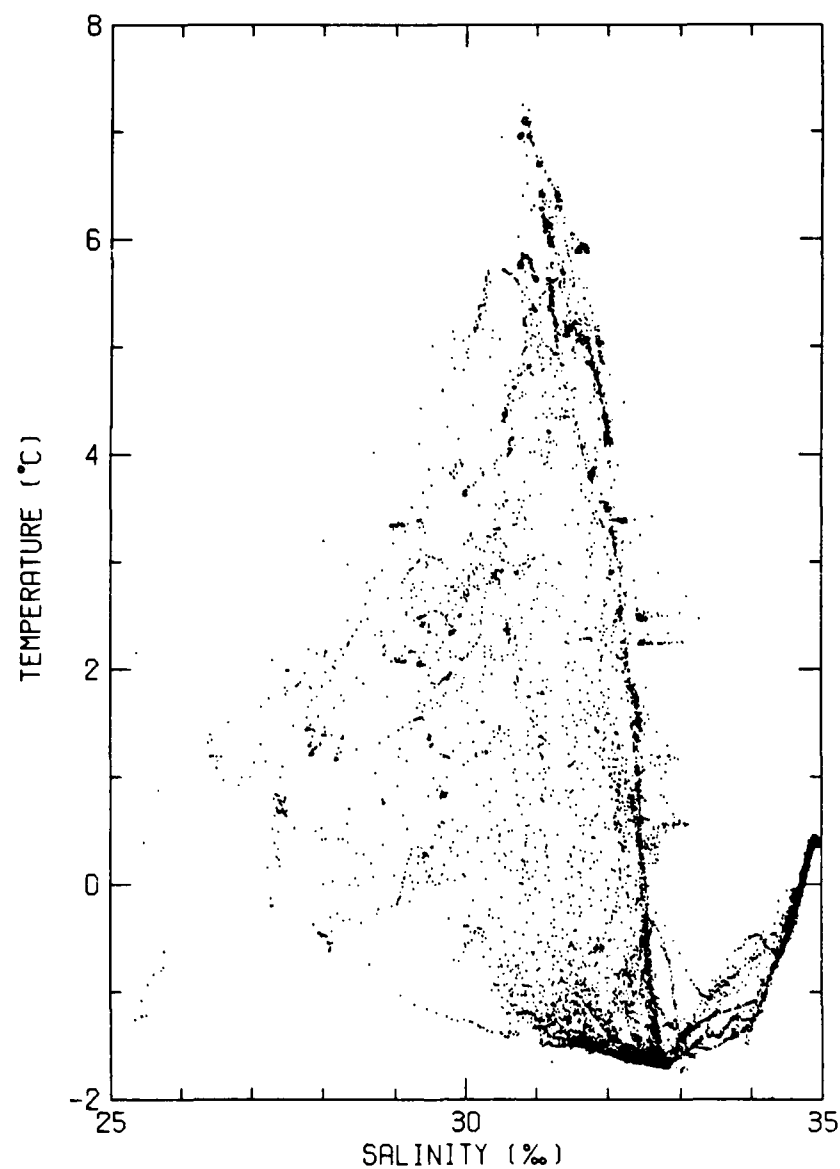


Figure 71. Composite TS diagram for the second Barrow Canyon survey, stations 174-263 (APL stations only).

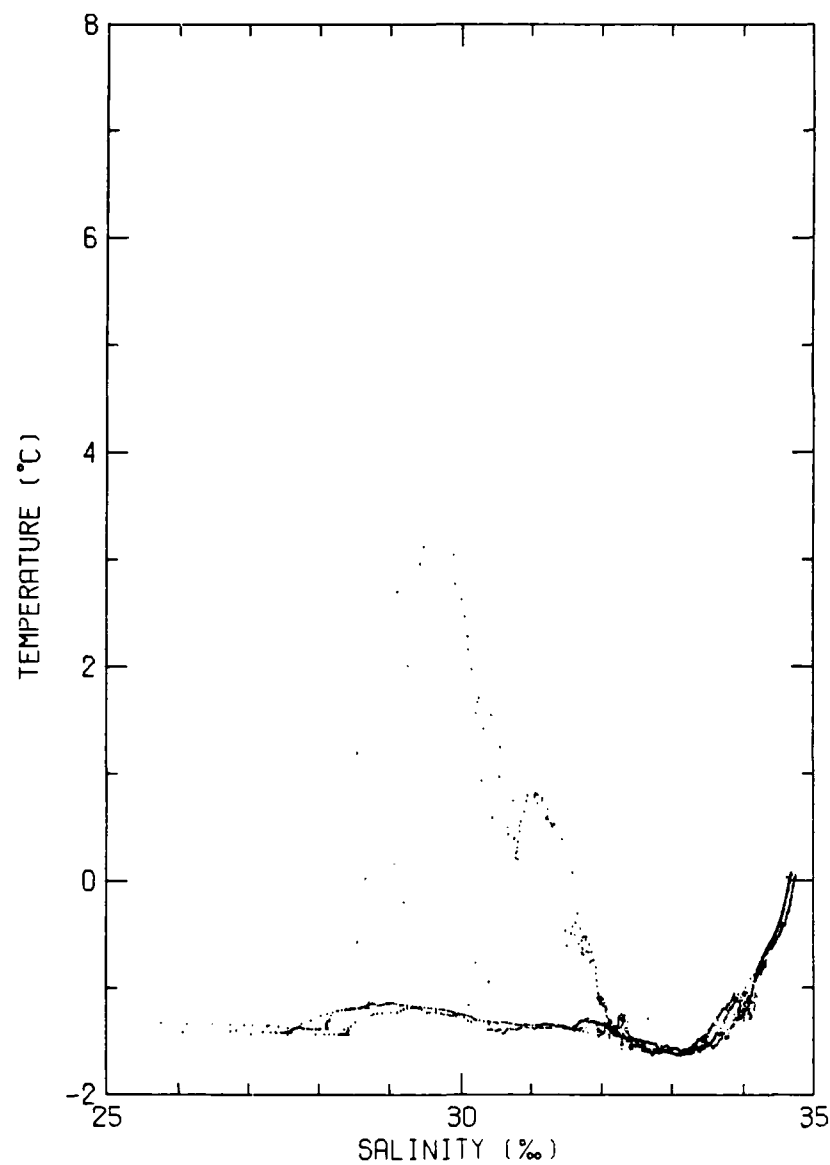


Figure 72. Composite TS diagram for the central portion of the survey area, stations 37, 41, and 159.

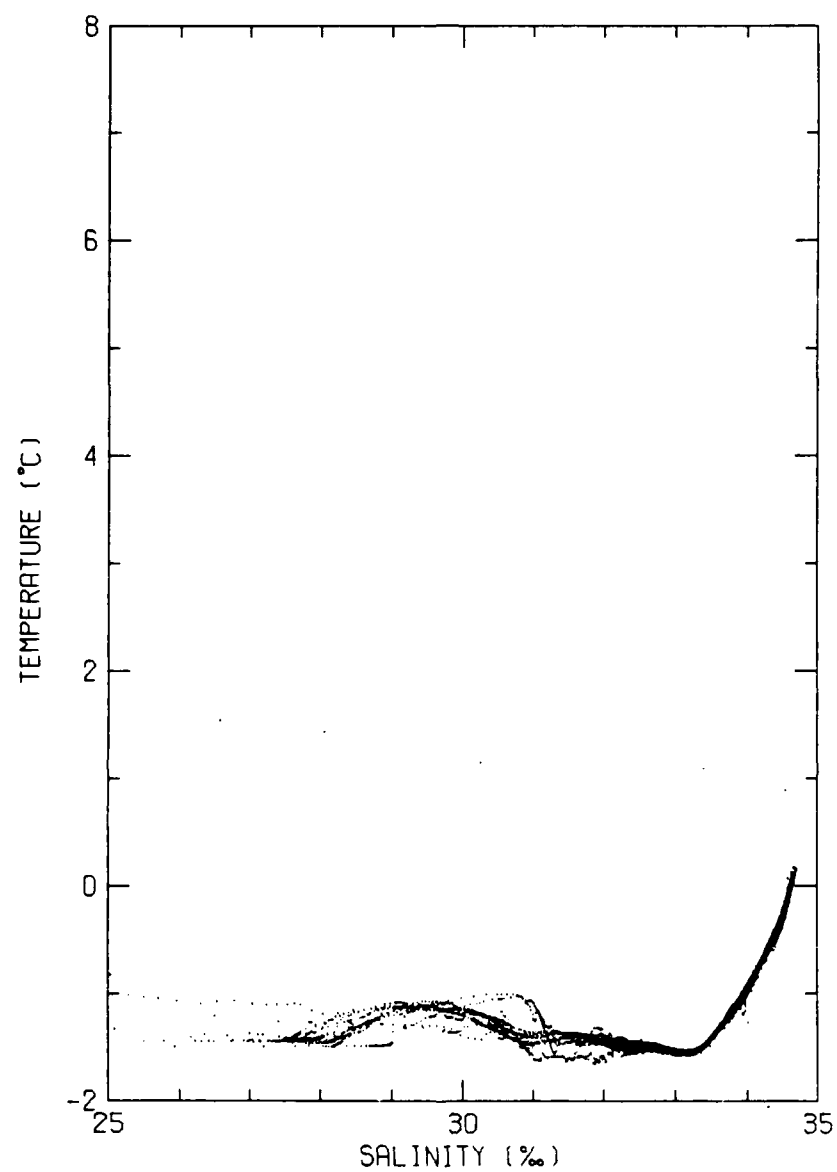


Figure 73. Composite TS diagram for the eastern portion of the survey area, stations 1, 11, 12, 24-32, 34, and 35.

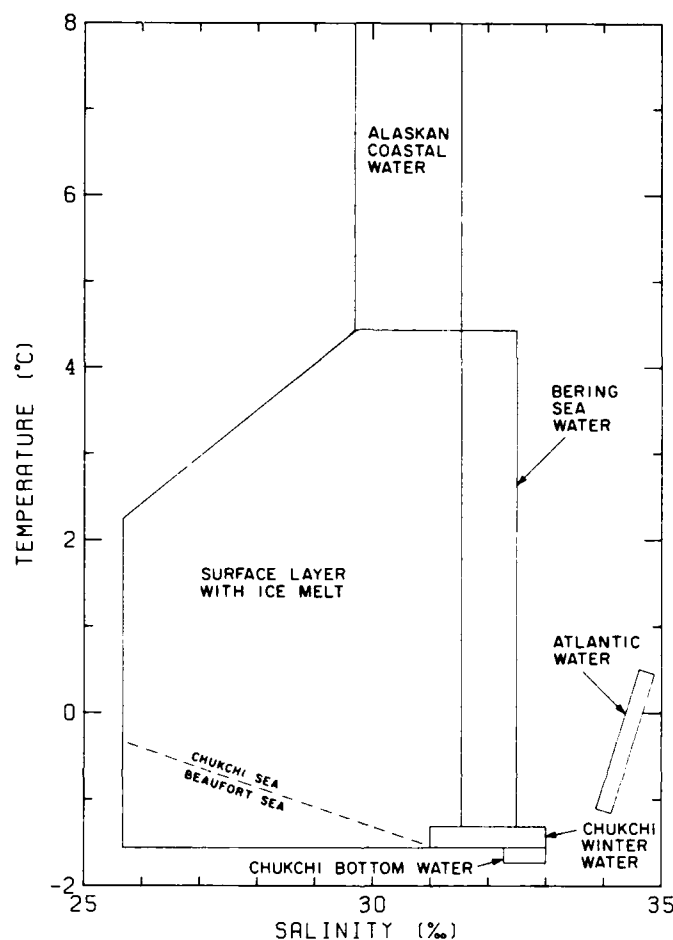


Figure 74. The outline of various water types on the TS diagram.

diagram before they mix with other types. Atlantic Water, for example, would occupy a narrow band at the right. The Chukchi bottom layer is the dark area in Figures 70 and 71 near $T = -1.7^{\circ}\text{C}$ and $S = 32.7\text{‰}$. This is not the same water as in Figures 72 and 73, as evidenced by the fact that the plot extends below (to a lower temperature than) the data in those figures.

The warm ($>1^{\circ}\text{C}$) water brought northward by the Alaskan Coastal Current from the shallows of Norton and Kotzebue sounds is not easily separable from the denser Bering Sea water described by Mountain et al.,⁵ but their choice of $31.5\text{--}32.5\text{‰}$ for Bering Sea water seems appropriate. Figure 72 shows the trace of warm water at station 159 which appears to be the eastern extreme of the $+1.0^{\circ}\text{C}$ water of the warm intrusion. Its position outside the water types designated in Figure 74 is due to cooling as the result of mixing with the existing winter water.

XI. CONCLUSIONS

We have observed the influence of three major inputs of water into the southern Beaufort Sea: a drainage of bottom water from the Chukchi Sea down the Barrow Canyon; the Alaskan Coastal Current, primarily from the Bering Sea; and the runoff from the Mackenzie River.

A. Chukchi Bottom Water

Prior measurements in the spring have shown a bottom layer of water with a slightly higher salinity than typical Chukchi Sea winter water. This water has been observed to flow down the Barrow Canyon during the spring and summer. The September 1985 measurements show a uniform mass of what appears to be this bottom water (-1.7°C , 32.7‰) at about 100 m depth which has slowly migrated down the Barrow Canyon and come to rest above the layer of Atlantic Water present in the Arctic Ocean. This Chukchi bottom water is observed as far east as 149°W longitude. Along the shoreward side of the canyon, it is being displaced by the densest portion of the coastal current.

B. Alaskan Coastal Current

The Alaskan Coastal Current originates in the Bering Sea and passes northward through Bering Strait. In the summer, it entrains the warmed waters of Norton Sound and Kotzebue Sound. Passing Pt. Hope, the warm water spreads generally northward, but there is a persistent branch to the right along the coast to Pt. Barrow. The August–September 1985 measurements show the warm intrusion closely following the coast and penetrating to a depth of 140 m in the Barrow Canyon. Satellite images show that, when the surface waters of the intrusion pass Pt. Barrow, they continue in an easterly direction for 100 km before mixing with the existing waters. Our CTD profiles in the area in late August 1985 show evidence of the intrusion as far east as 148°W longitude. Eventually the warm mass collapses into thin layers which have been observed (in 1984) as far north as $73^{\circ}20'\text{N}$ latitude. Satellite images show that when the waters pass Pt. Barrow a warm surface layer also spreads along the coast as far east as Cape Halkett.

C. Mackenzie River Outflow

The influence of the Mackenzie River was observed in the surface temperatures 150 km off the coast and in surface salinities 220 km off the coast. Its extent depends somewhat on the location of the ice pack, which tends to block the runoff's northward movement. In August–September 1985, the river water extended from 136 to 141°W longitude.

Based on measurements of the river's flow and temperature at gauging stations, we calculate that the annual heat input by the Mackenzie River into the Beaufort Sea, above the usual sea temperature, is 2.4×10^{15} kilogram calories. With its effect on salinity being greater than its effect on temperature, the Mackenzie River outflow influences Beaufort Sea oceanography nearly as much as the Alaskan Coastal Current.

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COASTAL OCEANOGRAPHY IN THE BEAUFORT SEA SUMMER 1985

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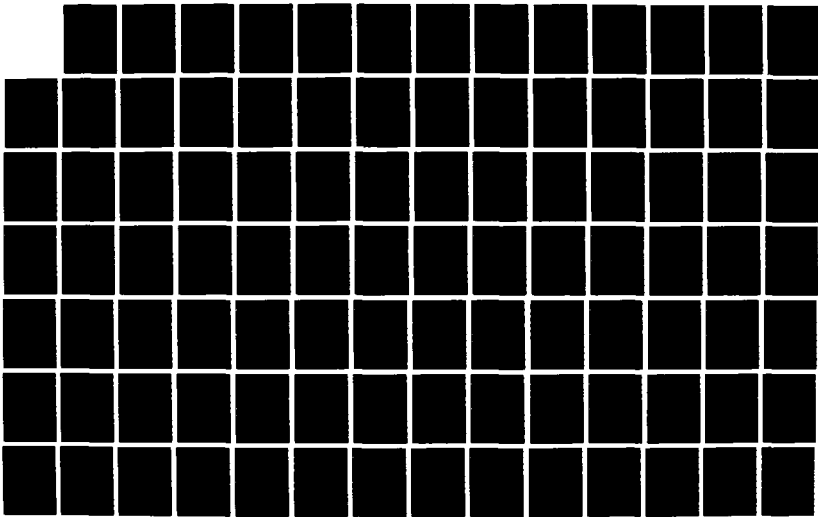
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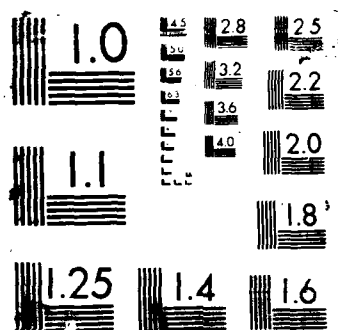
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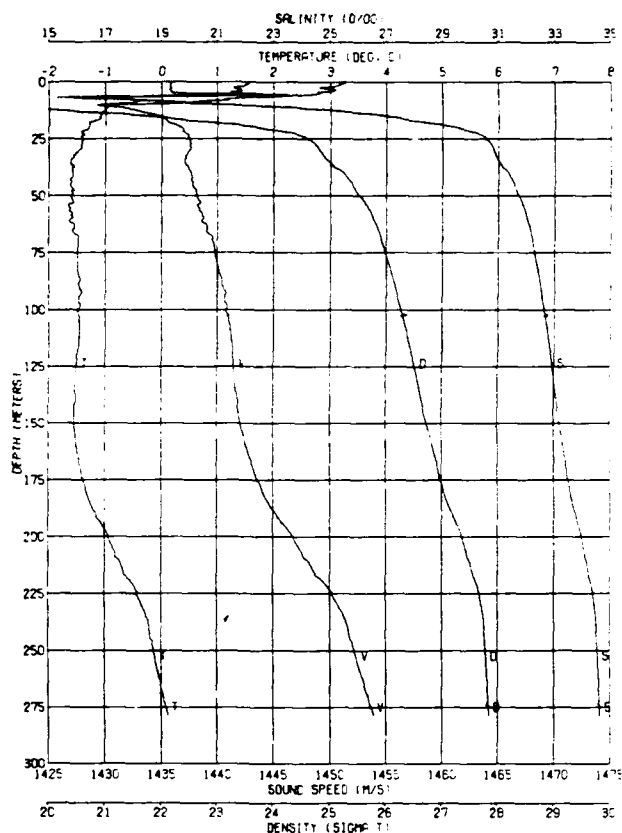
APPENDIX A

CTD Profiles

This appendix contains the CTD profiles taken by the Applied Physics Laboratory (APL) and the Arctic Submarine Laboratory (ASL) from 17 August to 20 September 1985. See Table II for list of stations.

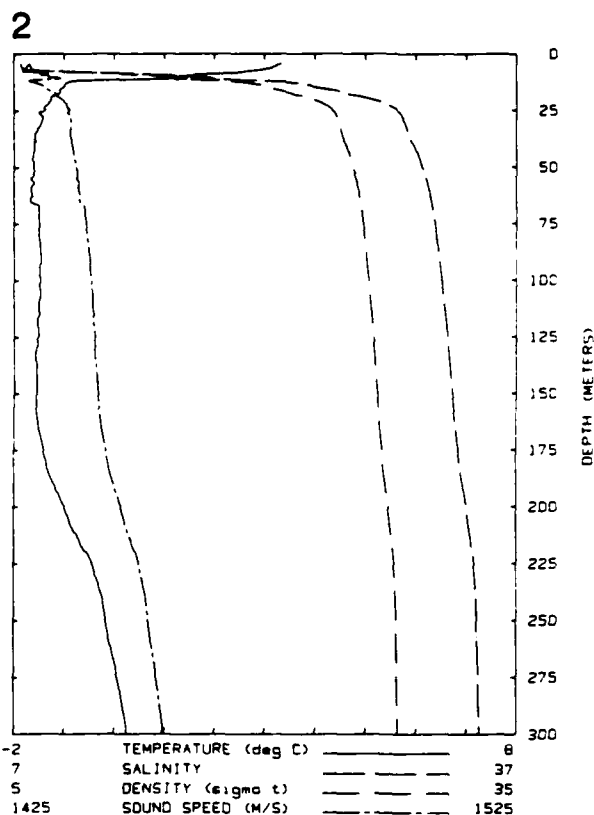
Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

1 2 X X 229 2247 Ship 70 11.1 138 44.1
229 2312 Ship 70 11.1 138 44.1



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

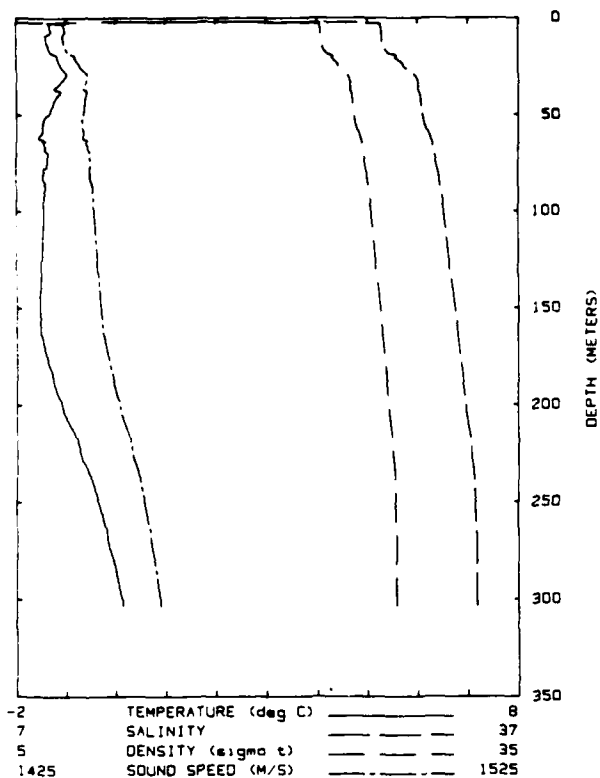
5.2	2.78	1443.5	16.89	21.11
10.3	-1.96	1429.3	17.59	21.88
15.1	-1.10	1434.8	21.83	27.14
20.1	-1.30	1436.7	23.77	29.55
25.2	-1.38	1437.6	24.62	30.59
30.1	-1.46	1437.5	24.82	30.84
35.0	-1.62	1437.0	24.98	31.03
40.1	-1.59	1437.6	25.23	31.35
45.3	-1.62	1437.8	25.40	31.55
50.3	-1.59	1438.2	25.53	31.72
55.3	-1.62	1438.3	25.67	31.89
60.1	-1.60	1438.7	25.76	32.00
65.3	-1.59	1439.0	25.86	32.12
70.0	-1.48	1439.6	25.93	32.20
75.1	-1.48	1439.8	25.99	32.29
80.2	-1.49	1440.0	26.06	32.36
85.3	-1.47	1440.3	26.11	32.43
90.1	-1.46	1440.5	26.16	32.50
95.2	-1.47	1440.6	26.21	32.56
100.2	-1.49	1440.7	26.28	32.64
110.3	-1.47	1441.2	26.37	32.76
120.0	-1.51	1441.3	26.47	32.88
130.3	-1.52	1441.6	26.56	32.99
140.1	-1.53	1441.8	26.64	33.09
150.1	-1.55	1442.1	26.74	33.20
160.1	-1.51	1442.6	26.83	33.33
170.1	-1.43	1443.3	26.94	33.45
180.0	-1.33	1444.1	27.04	33.58
190.0	-1.16	1445.3	27.19	33.78
200.3	-0.93	1446.8	27.37	34.01
210.2	-0.74	1448.1	27.48	34.16
220.3	-0.51	1449.6	27.62	34.34
230.1	-0.34	1450.7	27.71	34.46
240.3	-0.21	1451.6	27.76	34.53
250.1	-0.14	1452.2	27.78	34.57
260.3	-0.05	1452.8	27.80	34.59
270.2	0.04	1453.4	27.83	34.63
278.8	0.12	1453.9	27.84	34.65



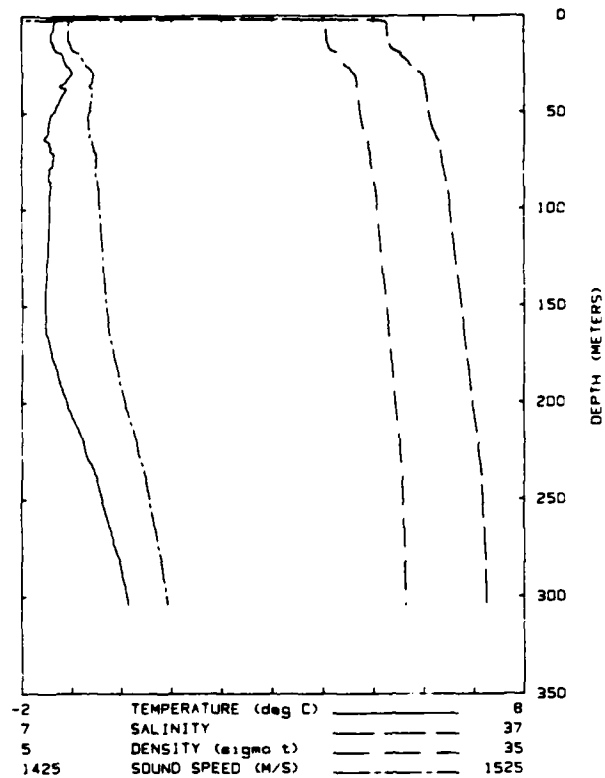
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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7.5	7.4	2.82	8.073	7.839	6.389	1427.0
11.4	11.3	0.90	17.303	18.287	15.484	1432.5
16.3	16.2	-1.09	21.430	25.886	20.893	1432.1
21.8	21.7	-1.30	23.578	28.051	23.370	1435.3
28.3	28.2	-1.41	24.342	30.191	24.284	1436.4
34.8	34.7	-1.55	24.481	30.533	24.573	1436.3
41.7	41.5	-1.58	24.759	30.830	24.895	1436.8
48.4	48.1	-1.59	25.007	31.278	25.177	1437.4
54.7	54.4	-1.62	25.182	31.552	25.399	1437.7
60.4	60.1	-1.66	25.335	31.787	25.590	1437.9
66.5	66.1	-1.60	25.522	31.878	25.744	1438.6
72.6	72.1	-1.50	25.674	32.083	25.827	1439.3
78.6	78.1	-1.49	25.778	32.206	25.926	1439.6
84.6	84.1	-1.46	25.878	32.313	26.012	1440.0
90.3	89.7	-1.45	25.953	32.399	26.082	1440.2
96.3	95.7	-1.49	25.893	32.487	26.153	1440.3
102.2	101.6	-1.48	26.061	32.573	26.223	1440.5
108.2	107.5	-1.46	26.151	32.672	26.303	1440.8
114.2	113.4	-1.51	26.172	32.754	26.370	1440.8
119.9	119.1	-1.54	26.214	32.836	26.437	1440.9
125.9	125.1	-1.51	26.284	32.900	26.488	1441.2
131.9	131.0	-1.55	26.318	32.987	26.560	1441.2
137.9	138.9	-1.54	26.383	33.058	26.617	1441.5
143.6	142.6	-1.55	26.421	33.114	26.662	1441.6
149.5	148.4	-1.55	26.471	33.179	26.712	1441.8
155.5	154.4	-1.55	26.536	33.264	26.784	1442.0
161.4	160.3	-1.52	26.610	33.339	26.844	1442.3
167.4	166.2	-1.48	26.694	33.415	26.905	1442.6
173.2	172.0	-1.43	26.813	33.505	26.977	1443.2
179.1	177.8	-1.38	26.815	33.582	27.038	1443.6
185.1	183.7	-1.31	27.036	33.871	27.107	1444.1
191.1	189.7	-1.20	27.232	33.808	27.216	1444.9
197.1	195.6	-1.07	27.436	33.843	27.320	1445.8
202.8	201.2	-0.96	27.611	34.052	27.404	1446.6
208.8	207.1	-0.87	27.763	34.150	27.480	1447.2
214.7	213.1	-0.72	27.881	34.272	27.572	1448.2
220.7	218.9	-0.60	28.183	34.378	27.854	1449.0
226.0	224.2	-0.44	28.389	34.474	27.724	1449.9
230.9	229.1	-0.30	28.458	34.515	27.754	1450.4
235.7	233.8	-0.10	28.587	34.571	27.785	1450.9
240.5	238.5	-0.24	28.645	34.606	27.821	1451.3
245.2	243.2	-0.20	28.692	34.622	27.832	1451.5
250.4	248.3	-0.17	28.740	34.643	27.847	1451.8
255.8	253.6	-0.12	28.780	34.657	27.857	1452.1
261.1	258.9	-0.08	28.833	34.674	27.868	1452.4
266.2	263.8	-0.03	28.804	34.687	27.884	1452.8
271.3	268.8	0.02	28.889	34.719	27.898	1453.1
276.3	273.8	0.06	29.015	34.733	27.908	1453.4
281.5	278.1	0.11	29.072	34.750	27.918	1453.7
286.5	284.0	0.15	29.121	34.782	27.926	1454.0
291.7	289.2	0.19	29.185	34.777	27.937	1454.3
296.7	294.1	0.23	29.213	34.788	27.943	1454.6
301.8	298.9	0.28	29.249	34.799	27.950	1454.8
304.7	302.0	0.29	29.282	34.808	27.956	1455.0
305.8	303.2	0.29	29.288	34.810	27.958	1455.1

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
3	X		230	1849	Ship	71 3.6	134 6.7
4	X		230	1918	Ship	71 3.6	134 6.7

3



4



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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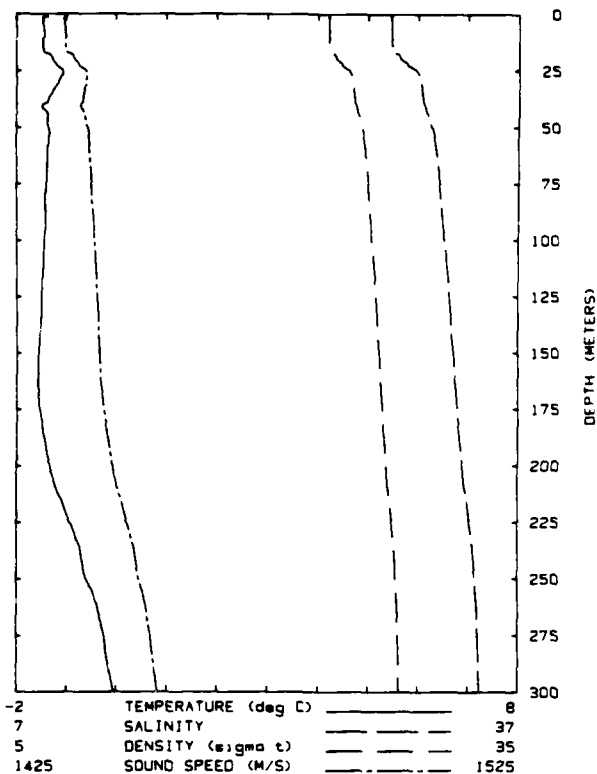
1.6	1.6	-0.88				
1.5	1.5	-0.87				
1.6	1.6	-0.87				
1.5	1.5	-0.86				
1.6	1.6	-0.85				
1.6	1.6	-0.88				
1.6	1.6	-0.77				
3.3	3.3	-1.27				
7.5	7.5	-1.37				
12.7	12.8	-1.44				
18.0	17.9	-1.41				
23.3	23.2	-1.31				
28.6	28.5	-1.28				
34.0	33.8	-1.32				
39.4	39.2	-1.40				
44.8	44.6	-1.45				
50.2	49.8	-1.55				
55.1	55.0	-1.59				
62.6	62.2	-1.63				
68.1	68.7	-1.57				
75.7	75.2	-1.55				
81.5	81.0	-1.58				
87.7	87.2	-1.57				
94.2	93.6	-1.57				
100.8	100.7	-1.56				
107.4	106.7	-1.56				
113.0	112.2	-1.57				
119.5	118.7	-1.56				
126.1	125.3	-1.56				
132.7	131.8	-1.55				
139.2	138.2	-1.56				
145.8	144.9	-1.56				
152.7	151.8	-1.58				
159.4	158.2	-1.53				
166.2	164.8	-1.49				
172.7	171.5	-1.45				
179.5	178.2	-1.38				
186.3	184.9	-1.30				
193.1	191.6	-1.23				
199.9	198.4	-1.12				
206.6	205.0	-1.06				
213.4	211.7	-0.95				
220.3	218.6	-0.80				
227.7	225.9	-0.73				
235.1	233.2	-0.59				
242.0	240.1	-0.48				
248.1	246.0	-0.40				
255.3	253.2	-0.31	28.170	34.043	27.370	1450.4
262.6	260.4	-0.24	28.313	34.143	27.448	1451.0
269.0	266.7	-0.18	28.408	34.306	27.496	1451.5
276.1	273.7	-0.14	28.488	34.367	27.543	1451.8
282.7	280.3	-0.07	28.597	34.321	27.583	1452.4
289.6	286.3	0.00	28.701	34.377	27.625	1452.9
294.7	292.2	0.05	28.784	34.426	27.661	1453.3
300.8	298.0	0.08	28.850	34.468	27.693	1453.6

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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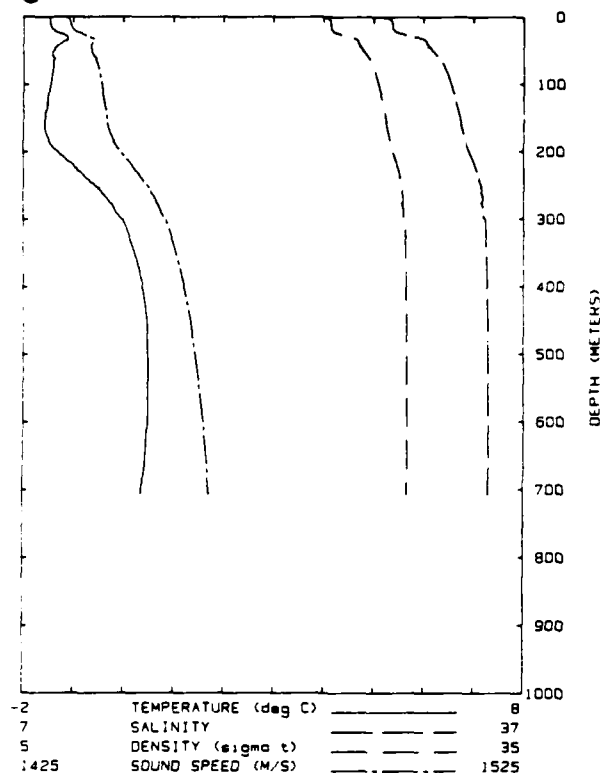
1.7	1.7	-0.30	8.185	8.813	7.125	1412.8
1.6	1.6	-0.30	7.870	8.884	8.840	1412.5
1.6	1.6	-0.30	7.822	8.827	8.884	1412.5
1.7	1.7	-0.28	7.828	8.514	8.802	1412.3
4.5	4.5	-1.38	23.333	28.761	23.153	1434.4
9.0	9.7	-1.41	23.338	28.842	23.203	1434.3
15.0	15.7	-1.38	23.494	28.886	23.327	1434.9
22.1	22.0	-1.18	24.278	28.851	24.015	1437.1
28.6	28.4	-1.01	24.871	30.835	24.644	1439.0
35.1	34.9	-1.14	25.150	31.022	24.860	1439.8
41.4	41.1	-1.18	25.226	31.155	25.089	1439.8
47.8	47.5	-1.31	25.185	31.242	25.142	1438.6
54.1	53.8	-1.45	25.175	31.354	25.236	1438.2
60.4	60.1	-1.48	25.335	31.598	25.434	1438.5
66.7	66.3	-1.45	25.555	31.869	25.853	1439.1
73.1	72.6	-1.38	25.782	32.008	25.785	1439.9
79.4	78.9	-1.44	25.808	32.188	25.911	1439.8
85.8	85.2	-1.44	25.829	32.368	26.056	1440.2
92.4	91.8	-1.45	25.888	32.441	26.116	1440.3
98.9	98.2	-1.44	26.086	32.537	26.193	1440.6
105.4	104.7	-1.45	26.121	32.614	26.256	1440.8
112.0	111.2	-1.48	26.172	32.895	26.322	1440.9
118.5	117.7	-1.47	26.228	32.783	26.383	1441.1
124.9	124.1	-1.48	26.282	32.860	26.455	1441.3
131.5	130.6	-1.50	26.337	32.855	26.533	1441.4
138.0	137.1	-1.52	26.403	33.082	26.620	1441.6
144.6	143.5	-1.54	26.464	33.182	26.701	1441.7
151.1	150.0	-1.55	26.522	33.248	26.772	1441.9
157.5	156.3	-1.53	26.588	33.328	26.836	1442.2
163.9	162.7	-1.52	26.659	33.403	26.898	1442.4
170.5	169.2	-1.48	26.788	33.501	26.974	1443.0
177.0	175.7	-1.41	26.881	33.571	27.029	1443.4
183.5	182.1	-1.32	27.028	33.677	27.112	1444.0
189.9	188.4	-1.26	27.142	33.756	27.174	1444.6
196.4	194.9	-1.18	27.301	33.881	27.257	1445.3
202.9	201.3	-1.08	27.432	33.940	27.318	1445.9
209.4	207.8	-0.99	27.591	34.048	27.403	1446.6
215.8	214.1	-0.88	27.784	34.182	27.490	1447.4
222.5	220.8	-0.78	27.830	34.247	27.554	1448.1
229.1	227.3	-0.71	28.020	34.300	27.595	1448.5
235.8	233.9	-0.57	28.217	34.410	27.678	1449.4
241.8	239.8	-0.48	28.335	34.485	27.719	1450.0
247.3	245.3	-0.43	28.408	34.501	27.748	1450.4
253.8	251.7	-0.38	28.501	34.545	27.778	1450.8
260.8	258.4	-0.28	28.603	34.590	27.811	1451.4
267.5	265.2	-0.22	28.688	34.620	27.831	1451.8
273.8	271.5	-0.18	28.755	34.640	27.844	1452.2
280.1	277.7	-0.08	28.844	34.673	27.869	1452.7
286.2	283.7	-0.00	28.848	34.708	27.882	1453.2
292.1	289.8	0.03	28.880	34.721	27.900	1453.5
297.7	295.1	0.10	28.982	34.743	27.914	1453.9
302.8	300.2	0.13	29.100	34.758	27.923	1454.2
305.5	302.8	0.15	29.121	34.780	27.925	1454.3
308.8	303.9	0.15	29.126	34.782	27.928	1454.3
308.8	303.9	0.15	29.126	34.780	27.925	1454.3

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
5	X		231	1554	Ship	71 33.9	133 59.5
6	X		232	0945	Ship	71 18.9	134 0.0

5



6



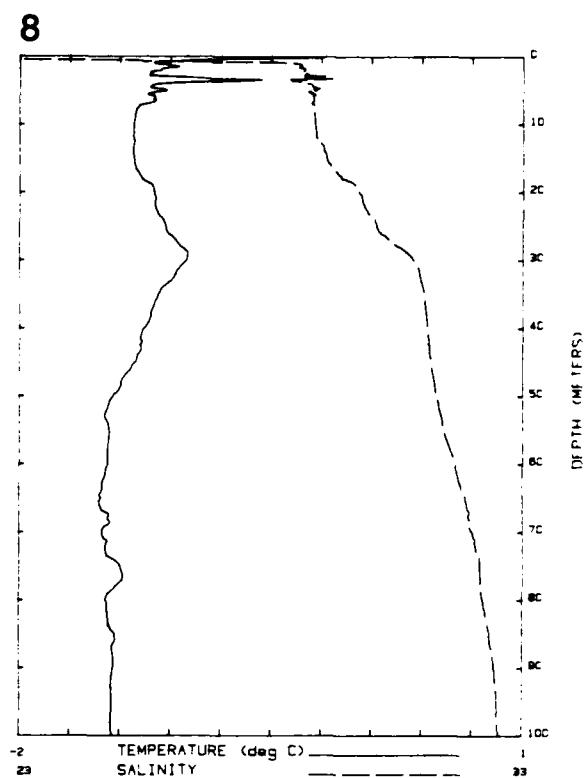
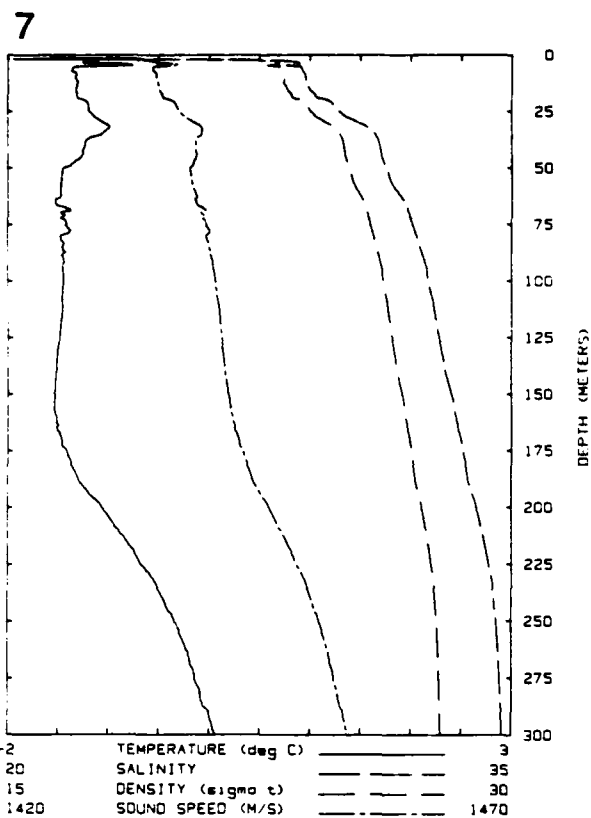
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.4	1.4	-1.43	23.704	29.358	23.621	1434.8
1.4	1.4	-1.41	23.686	29.315	23.586	1434.8
1.8	1.9	-1.47	23.852	29.328	23.597	1434.8
5.7	5.6	-1.45	23.690	29.352	23.618	1434.8
11.0	11.0	-1.47	23.704	29.386	23.644	1434.8
18.3	18.2	-1.32	24.123	28.804	23.979	1436.2
24.6	24.7	-1.09	25.035	30.802	24.781	1438.8
31.5	31.3	-1.19	25.216	31.150	25.085	1438.8
38.1	37.9	-1.36	25.175	31.263	25.160	1438.3
44.9	44.7	-1.36	25.384	31.552	25.394	1438.8
51.8	51.5	-1.34	25.845	31.883	25.861	1439.4
58.6	58.3	-1.37	25.749	32.048	25.784	1439.6
65.4	65.0	-1.38	25.818	32.152	25.880	1439.8
72.1	71.6	-1.40	25.879	32.247	25.957	1440.0
78.9	78.4	-1.41	25.927	32.325	26.020	1440.1
85.8	85.3	-1.42	25.976	32.403	26.084	1440.3
92.6	92.2	-1.42	26.038	32.474	26.142	1440.5
99.5	99.0	-1.44	26.095	32.571	26.220	1440.7
106.3	105.6	-1.46	26.168	32.689	26.317	1440.8
113.3	112.5	-1.47	26.203	32.747	26.364	1441.0
120.2	119.4	-1.49	26.254	32.834	26.435	1441.1
127.1	126.2	-1.50	26.304	32.912	26.498	1441.3
133.8	132.8	-1.51	26.347	32.974	26.549	1441.4
140.6	139.7	-1.52	26.372	33.021	26.587	1441.5
147.5	146.5	-1.54	26.424	33.104	26.654	1441.7
154.4	153.3	-1.57	26.459	33.183	26.719	1441.8
161.0	159.8	-1.58	26.486	33.226	26.754	1441.9
168.7	165.5	-1.56	26.543	33.289	26.805	1442.1
173.1	171.8	-1.55	26.603	33.353	26.857	1442.4
179.5	178.2	-1.51	26.682	33.408	26.898	1442.8
185.8	184.4	-1.46	26.766	33.472	26.951	1443.1
192.1	190.7	-1.41	26.876	33.561	27.021	1443.6
197.8	196.1	-1.37	26.958	33.628	27.074	1444.0
203.9	202.3	-1.31	27.088	33.725	27.151	1444.5
210.3	209.4	-1.22	27.232	33.822	27.227	1445.2
216.5	214.6	-1.10	27.437	33.961	27.336	1446.0
222.7	220.9	-1.00	27.584	34.051	27.404	1446.7
228.1	226.3	-0.89	27.762	34.157	27.486	1447.5
234.5	231.8	-0.79	27.920	34.258	27.562	1448.2
240.7	238.7	-0.70	28.054	34.332	27.621	1448.8
246.9	244.8	-0.65	28.143	34.393	27.668	1449.2
253.3	251.2	-0.57	28.281	34.456	27.715	1449.8
258.8	256.5	-0.45	28.387	34.501	27.746	1450.5
264.0	261.6	-0.37	28.504	34.550	27.782	1451.0
269.3	267.0	-0.31	28.582	34.587	27.809	1451.4
274.7	272.4	-0.25	28.652	34.608	27.824	1451.8
280.1	277.8	-0.21	28.705	34.631	27.840	1452.1
285.8	283.3	-0.19	28.748	34.653	27.859	1452.3
291.4	288.8	-0.15	28.788	34.670	27.887	1452.8
296.7	294.1	-0.09	28.860	34.687	27.879	1453.0
301.9	299.3	-0.05	28.910	34.702	27.888	1453.3

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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2.2	2.2	-1.47	23.280	28.792	23.183	1433.8
6.7	6.7	-1.47	23.470	28.074	23.382	1434.3
12.2	12.1	-1.48	23.512	28.119	23.428	1434.5
17.8	17.5	-1.43	23.549	28.137	23.442	1434.8
23.0	22.9	-1.35	23.746	28.321	23.568	1435.5
29.3	29.1	-1.14	24.585	30.243	24.331	1437.8
35.3	35.1	-1.13	25.203	31.083	24.993	1439.1
41.3	41.1	-1.28	25.188	31.197	25.105	1438.7
47.4	47.1	-1.37	25.289	31.433	25.288	1438.6
53.5	53.2	-1.42	25.403	31.831	25.458	1438.8
59.2	58.8	-1.42	25.561	31.841	25.629	1439.1
64.7	64.4	-1.40	25.705	32.017	25.771	1439.8
70.8	70.3	-1.40	25.819	32.185	25.891	1439.8
76.9	76.4	-1.41	25.898	32.283	25.988	1440.1
83.0	82.5	-1.42	25.971	32.394	26.077	1440.2
88.7	88.2	-1.43	26.022	32.475	26.143	1440.4
94.3	93.7	-1.44	26.075	32.554	26.207	1440.5
100.4	99.7	-1.46	26.122	32.630	26.269	1440.7
106.4	105.7	-1.48	26.153	32.695	26.321	1440.8
112.4	111.7	-1.49	26.197	32.762	26.377	1440.9
118.1	117.3	-1.51	26.240	32.827	26.438	1441.0
123.8	122.7	-1.51	26.285	32.899	26.488	1441.2
129.6	128.7	-1.52	26.324	32.960	26.538	1441.3
135.7	134.7	-1.53	26.371	33.022	26.586	1441.4
141.7	140.7	-1.56	26.394	33.092	26.645	1441.5
147.4	146.3	-1.58	26.425	33.136	26.681	1441.6
152.8	151.7	-1.57	26.441	33.181	26.701	1441.7
158.9	157.8	-1.57	26.493	33.233	26.760	1441.9
165.1	163.8	-1.57	26.541	33.298	26.812	1442.0
171.6	170.3	-1.58	26.594	33.351	26.855	1442.3
177.7	176.3	-1.53	26.683	33.404	26.897	1442.8
183.4	182.0	-1.50	26.735	33.468	26.949	1443.2
189.9	188.5	-1.48	26.821	33.537	27.003	1443.3
196.3	194.8	-1.39	26.958	33.644	27.091	1443.9
202.7	201.1	-1.28	27.120	33.744	27.186	1444.6
208.7	207.1	-1.19	27.295	33.879	27.272	1445.3
214.5	212.9	-1.13	27.412	33.958	27.334	1445.8
221.1	219.3	-1.00	27.584	34.123	27.428	1446.7
227.5	217.5	-0.92	27.724	34.142	27.475	1447.3
234.0	215.1	-0.83	27.865	34.231	27.544	1447.9
240.1	213.2	-0.78	27.914	34.208	27.522	1448.3
246.1	211.1	-0.87	28.084	34.340	27.625	1449.0
252.9	210.0	-0.57	28.264	34.455	27.714	1449.8
259.1	207.0	-0.47	28.355	34.481	27.715	1450.3
264.9	202.7	-0.40	28.444	34.498	27.741	1450.8
270.8	200.5	-0.34	28.550	34.588	27.795	1451.3
276.5	200.1	-0.28	28.587	34.548	27.775	1451.8
282.5	200.1	-0.20	28.653	34.545	27.770	1452.1
288.3	200.8	-0.18	28.707	34.587	27.802	1452.3
294.0	201.5	-0.13	28.748	34.585	27.798	1452.6
299.5	200.9	-0.07	28.798	34.577	27.789	1453.0
304.8	201.9	-0.00	28.861	34.716	27.888	1453.6

Station Number 7 8
ASL Cast X X
APL Cast
Julian Day 233 233
GMT hhmm 0147 0214
Platform Ship Ship
Latitude 71 8.2 71 8.2
Longitude 134 9.7 134 9.7



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.7	1.7	-0.88	18.822	22.149	17.797	1427.7
1.7	1.7	-0.88	18.182	22.934	18.428	1428.4
1.8	1.8	-0.89	18.068	21.443	17.227	1428.7
1.8	1.8	-0.89	18.951	19.889	15.980	1425.6
1.9	1.9	-0.88	18.771	19.633	15.788	1425.3
3.9	3.9	-1.19	23.351	28.850	23.045	1435.0
9.2	9.2	-1.31	23.418	28.854	23.212	1434.8
14.4	14.3	-1.32	23.493	28.953	23.292	1435.0
19.4	19.3	-1.30	23.718	29.238	23.522	1435.5
24.5	24.3	-1.19	24.232	29.819	23.989	1437.0
29.8	29.6	-1.07	24.732	30.388	24.430	1438.4
35.7	35.5	-1.08	25.159	30.855	24.905	1439.2
41.7	41.5	-1.24	25.137	31.089	25.017	1438.7
47.6	47.3	-1.33	25.147	31.193	25.103	1438.5
53.1	52.8	-1.46	25.161	31.330	25.224	1438.2
58.6	58.2	-1.46	25.259	31.479	25.337	1438.4
64.5	64.2	-1.53	25.415	31.758	25.583	1438.6
70.5	70.1	-1.48	25.586	31.934	25.708	1439.2
76.4	75.9	-1.42	25.740	32.077	25.820	1439.7
81.9	81.4	-1.47	25.789	32.195	25.917	1439.7
87.3	86.7	-1.45	25.895	32.314	26.012	1440.1
93.2	92.6	-1.45	25.983	32.437	26.112	1440.3
99.1	98.5	-1.44	26.042	32.503	26.188	1440.8
105.0	104.3	-1.45	26.084	32.584	26.231	1440.7
110.5	109.8	-1.48	26.153	32.686	26.298	1440.9
115.9	115.1	-1.46	26.195	32.726	26.348	1441.0
121.8	120.9	-1.48	26.234	32.794	26.402	1441.1
127.7	126.8	-1.49	26.283	32.887	26.462	1441.3
133.5	132.6	-1.51	26.332	32.952	26.531	1441.4
139.0	138.0	-1.51	26.379	33.020	26.588	1441.6
144.4	143.4	-1.52	26.428	33.097	26.648	1441.7
150.2	149.2	-1.53	26.489	33.201	26.733	1441.9
156.2	155.0	-1.53	26.571	33.287	26.811	1442.1
162.0	160.8	-1.51	26.635	33.358	26.880	1442.4
167.5	166.3	-1.50	26.692	33.428	26.914	1442.8
172.8	171.5	-1.48	26.788	33.515	26.985	1443.0
178.6	177.2	-1.40	26.894	33.580	27.038	1443.5
184.5	183.1	-1.34	27.008	33.684	27.103	1444.0
190.3	188.8	-1.28	27.101	33.724	27.148	1444.4
195.7	194.2	-1.19	27.285	33.836	27.237	1445.1
201.0	199.5	-1.07	27.448	33.952	27.327	1445.8
206.8	205.2	-0.98	27.593	34.043	27.397	1446.5
212.7	211.0	-0.88	27.733	34.127	27.462	1447.2
218.5	216.8	-0.79	27.888	34.218	27.531	1447.9
223.8	222.2	-0.71	28.005	34.285	27.583	1448.4
229.4	227.6	-0.63	28.129	34.357	27.637	1449.0
234.8	233.0	-0.54	28.261	34.428	27.692	1449.6
239.9	238.0	-0.48	28.342	34.487	27.718	1450.0
245.0	243.0	-0.42	28.416	34.503	27.747	1450.4
250.2	248.1	-0.36	28.501	34.540	27.773	1450.8
255.5	253.4	-0.30	28.581	34.578	27.800	1451.2
260.8	258.4	-0.28	28.630	34.584	27.812	1451.5
266.0	263.8	-0.20	28.700	34.620	27.830	1451.9
271.4	269.1	-0.18	28.728	34.630	27.837	1452.1
277.1	274.7	-0.14	28.780	34.648	27.850	1452.4
282.5	280.1	-0.09	28.839	34.688	27.865	1452.7
287.8	285.4	-0.07	28.889	34.684	27.875	1452.9
293.2	290.7	0.00	28.952	34.708	27.881	1453.4
298.8	296.0	0.03	28.991	34.721	27.900	1453.8

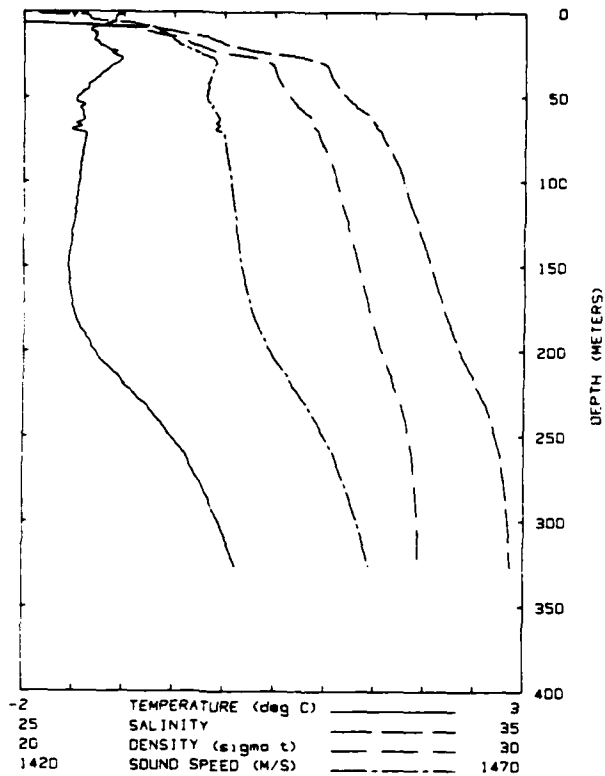
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.2	2.2	-0.88	18.878	22.318	17.933	1429.0
2.7	2.7	-1.18	22.788	27.840	22.390	1434.1
3.5	3.5	-1.08	23.387	28.548	22.881	1435.5
4.7	4.8	-1.21	23.347	28.859	23.053	1435.0
6.4	6.4	-1.22	23.483	28.827	23.189	1435.2
7.9	7.9	-1.19	23.501	28.847	23.204	1435.4
9.5	9.4	-1.28	23.446	28.889	23.224	1434.9
11.1	11.0	-1.31	23.433	28.871	23.225	1434.9
12.7	12.6	-1.32	23.444	28.893	23.243	1434.9
14.2	14.2	-1.32	23.485	28.942	23.283	1435.0
16.0	15.9	-1.32	23.585	29.057	23.378	1435.1
17.6	17.5	-1.32	23.627	29.133	23.437	1435.3
19.2	19.1	-1.28	23.785	29.316	23.585	1435.7
20.9	20.8	-1.21	24.098	29.664	23.864	1436.6
22.8	22.5	-1.19	24.215	29.800	23.974	1436.9
24.3	24.2	-1.19	24.269	29.870	24.031	1437.2
26.1	26.0	-1.14	24.452	30.069	24.190	1437.5
27.8	27.7	-1.12	24.532	30.154	24.258	1437.8
29.7	29.5	-1.05	24.802	30.445	24.492	1438.5
31.5	31.4	-1.00	25.081	30.785	24.766	1439.3
33.2	33.1	-1.05	25.163	30.930	24.883	1439.3
35.1	34.9	-1.10	25.164	30.980	24.925	1439.1
36.8	36.8	-1.17	25.155	31.039	24.974	1438.9
38.6	38.4	-1.20	25.150	31.065	24.987	1438.8
40.4	40.2	-1.22	25.154	31.092	25.019	1438.8
42.2	42.0	-1.28	25.138	31.110	25.035	1438.6
44.1	43.8	-1.27	25.152	31.141	25.059	1438.6
45.9	45.6	-1.28	25.155	31.158	25.074	1438.6
47.8	47.3	-1.33	25.153	31.196	25.105	1438.5
49.5	49.2	-1.38	25.141	31.238	25.138	1438.3
51.3	51.0	-1.41	25.148	31.274	25.170	1438.3
53.0	52.7	-1.48	25.145	31.325	25.212	1438.1
54.8	54.6	-1.48	25.165	31.380	25.257	1438.1
56.7	56.4	-1.47	25.217	31.428	25.284	1438.3
58.5	58.2	-1.47	25.283	31.489	25.344	1438.4
60.3	59.9	-1.47	25.322	31.574	25.414	1438.5
62.1	61.7	-1.47	25.388	31.683	25.488	1438.7
63.9	63.6	-1.48	25.418	31.720	25.533	1438.7
65.7	65.3	-1.50	25.458	31.787	25.587	1438.8
67.6	67.2	-1.52	25.504	31.869	25.654	1438.8
69.4	69.0	-1.48	25.588	31.958	25.724	1438.1
71.2	70.8	-1.47	25.584	31.933	25.704	1438.2
73.0	72.8	-1.50	25.638	32.027	25.781	1438.2
74.9	74.4	-1.48	25.685	32.078	25.821	1438.4
76.7	76.2	-1.42	25.795	32.153	25.882	1438.8
78.5	78.0	-1.38	25.830	32.182	25.888	1440.0
80.3	79.8	-1.42	25.810	32.179	25.903	1439.8
82.2	81.7	-1.48	25.791	32.214	25.932	1439.7
83.9	83.4	-1.47	25.832	32.281	25.970	1439.8
85.8	85.2	-1.48	25.878	32.309	26.008	1440.0
87.6	87.0	-1.43	25.932	32.344	26.038	1440.2
89.4	88.8	-1.44	25.950	32.387	26.071	1440.2
91.2	90.7	-1.44	25.988	32.427	26.104	1440.3
93.1	92.5	-1.44	26.001	32.453	26.125	1440.4
94.8	94.2	-1.45	26.010	32.473	26.141	1440.4
96.7	96.1	-1.45	26.037	32.484	26.157	1440.5
98.6	97.9	-1.45	26.035	32.503	26.185	1440.5
100.3	99.7	-1.45	26.043	32.514	26.175	1440.5

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

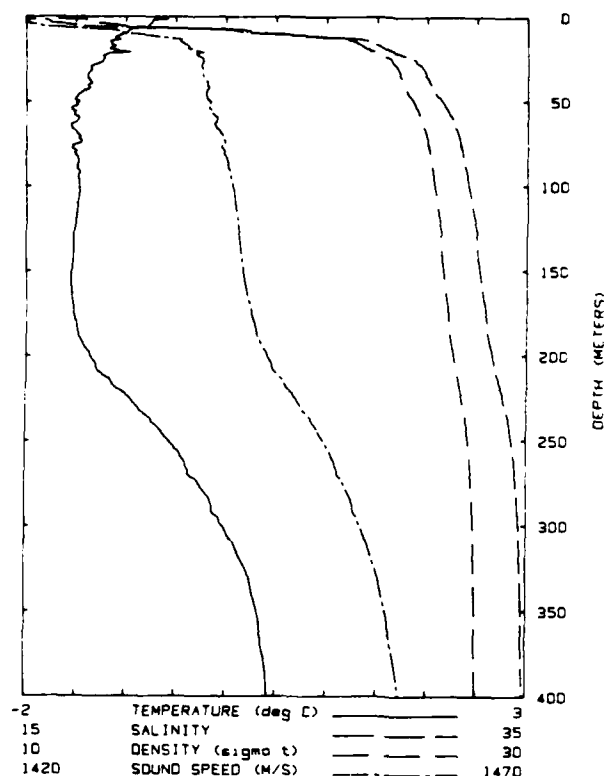
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10 X 233 2145 Ship 70 53.8 135 24.1

9



10

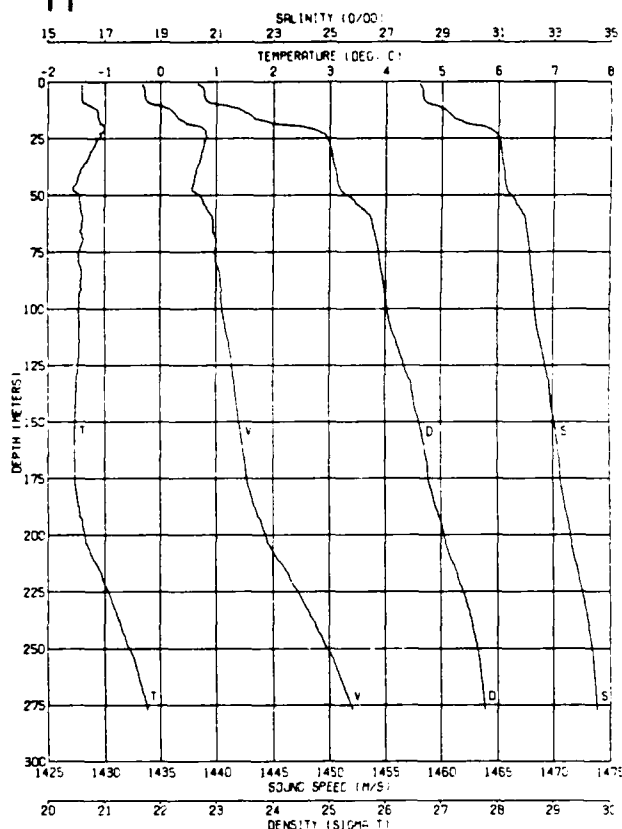


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.5	1.5	-0.91	15.592	18.278	14.674	1422.4
6.2	6.2	-1.10	18.652	23.658	19.014	1428.8
12.7	12.6	-1.27	22.887	28.098	22.600	1434.0
19.2	19.1	-1.25	23.576	29.003	23.331	1435.4
25.9	25.7	-1.08	24.580	30.178	24.277	1438.0
32.7	32.5	-1.13	25.190	31.048	24.981	1439.0
39.4	39.2	-1.26	25.155	31.135	25.054	1438.6
46.2	46.0	-1.36	25.179	31.272	25.187	1438.4
52.9	52.6	-1.47	25.263	31.499	25.353	1439.3
59.7	59.3	-1.41	25.515	31.771	25.572	1439.1
66.3	65.9	-1.48	25.821	31.983	25.746	1439.2
73.0	72.6	-1.39	25.814	32.137	25.868	1440.0
79.8	79.3	-1.39	25.898	32.268	25.974	1440.2
86.6	86.1	-1.42	25.971	32.388	26.072	1440.3
93.4	92.8	-1.42	26.050	32.509	26.170	1440.5
99.9	99.3	-1.44	26.093	32.568	26.218	1440.7
106.7	106.0	-1.46	26.135	32.645	26.281	1440.8
113.5	112.8	-1.47	26.176	32.708	26.332	1440.9
120.3	119.5	-1.48	26.223	32.788	26.395	1441.1
127.0	126.2	-1.50	26.281	32.878	26.470	1441.2
133.6	132.7	-1.51	26.330	32.949	26.528	1441.4
140.3	139.4	-1.57	26.369	33.024	26.589	1441.5
147.1	146.0	-1.55	26.412	33.098	26.650	1441.6
153.8	152.7	-1.54	26.485	33.165	26.704	1441.8
160.4	159.2	-1.54	26.510	33.222	26.750	1442.0
167.1	165.9	-1.53	26.570	33.282	26.808	1442.3
173.8	172.5	-1.52	26.644	33.368	26.868	1442.6
180.5	179.1	-1.48	26.724	33.439	26.925	1442.9
187.2	185.8	-1.44	26.826	33.528	26.994	1443.4
193.7	192.2	-1.37	26.854	33.617	27.068	1443.9
200.3	198.6	-1.31	27.084	33.897	27.129	1444.4
207.0	205.4	-1.23	27.197	33.785	27.197	1445.0
213.7	212.0	-1.11	27.388	33.909	27.293	1445.9
220.4	218.6	-1.01	27.556	34.016	27.376	1446.6
227.0	225.2	-0.88	27.748	34.133	27.467	1447.4
233.7	231.9	-0.76	27.935	34.248	27.555	1448.3
240.6	238.6	-0.68	28.082	34.322	27.611	1448.9
247.6	245.6	-0.58	28.200	34.392	27.664	1449.5
254.4	252.3	-0.48	28.326	34.455	27.710	1450.1
260.8	258.8	-0.41	28.444	34.545	27.777	1450.7
267.3	265.1	-0.34	28.527	34.582	27.804	1451.2
273.9	271.5	-0.28	28.604	34.614	27.828	1451.7
280.4	278.0	-0.22	28.688	34.648	27.850	1452.2
286.3	283.9	-0.17	28.747	34.635	27.841	1452.4
292.1	289.6	-0.14	28.780	34.648	27.850	1452.6
298.2	295.6	-0.08	28.849	34.667	27.862	1453.0
303.4	300.8	-0.04	28.902	34.684	27.874	1453.3
309.5	306.8	-0.01	28.946	34.698	27.883	1453.6
319.5	316.7	0.06	29.029	34.724	27.901	1454.1

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.7	1.7	-0.58	12.386	14.104	11.311	1418.4
2.1	2.1	-0.70	13.656	15.725	12.617	1420.0
5.7	5.7	-0.78	14.764	17.152	13.767	1421.6
11.9	11.9	-1.09	21.813	26.827	21.410	1432.9
18.5	18.4	-1.12	23.808	29.189	23.479	1436.3
24.8	24.7	-1.22	24.837	30.399	24.459	1437.6
31.1	31.0	-1.35	24.856	30.825	24.806	1437.6
37.8	37.8	-1.36	25.012	31.048	24.987	1438.0
44.5	44.2	-1.43	25.125	31.274	25.170	1438.1
51.2	50.9	-1.49	25.335	31.515	25.448	1438.4
57.8	57.4	-1.53	25.482	31.852	25.841	1438.8
64.3	64.0	-1.56	25.612	32.059	25.809	1439.7
71.0	70.6	-1.48	25.836	32.256	25.965	1439.7
77.7	77.2	-1.54	25.826	32.333	26.030	1439.5
84.4	83.9	-1.48	25.976	32.468	26.138	1440.1
91.0	90.4	-1.48	26.055	32.555	26.216	1440.3
97.6	97.0	-1.47	26.105	32.621	26.262	1440.6
104.2	103.8	-1.47	26.170	32.704	26.329	1440.8
111.0	110.2	-1.49	26.203	32.774	26.386	1440.9
117.6	116.8	-1.50	26.259	32.857	26.453	1441.0
124.1	123.2	-1.51	26.314	32.837	26.519	1441.2
130.7	129.8	-1.52	26.358	33.009	26.577	1441.4
137.4	136.4	-1.53	26.372	33.027	26.591	1441.5
144.0	143.0	-1.53	26.392	33.056	26.616	1441.6
150.8	149.6	-1.55	26.426	33.115	26.664	1441.7
156.9	155.8	-1.55	26.462	33.188	26.707	1441.9
163.5	162.3	-1.55	26.508	33.222	26.750	1442.1
170.1	168.8	-1.54	26.573	33.296	26.810	1442.3
176.6	175.3	-1.52	26.626	33.354	26.856	1442.6
183.1	181.7	-1.50	26.703	33.421	26.910	1442.6
189.5	188.1	-1.47	26.759	33.469	26.948	1443.2
196.1	194.6	-1.42	26.882	33.570	27.028	1443.7
202.7	201.1	-1.35	26.998	33.647	27.089	1444.2
209.3	207.6	-1.30	27.080	33.704	27.133	1444.6
215.7	214.0	-1.18	27.313	33.863	27.258	1445.6
222.3	220.5	-1.05	27.500	33.986	27.354	1446.4
229.0	227.2	-0.93	27.882	34.099	27.441	1447.2
235.7	233.8	-0.82	27.870	34.223	27.537	1448.0
242.3	240.4	-0.71	28.028	34.309	27.602	1448.7
248.9	246.8	-0.61	28.174	34.387	27.661	1449.4
255.7	253.6	-0.51	28.313	34.453	27.710	1450.1
262.3	260.1	-0.43	28.418	34.502	27.746	1450.8
268.0	266.7	-0.37	28.500	34.545	27.778	1451.0
275.4	273.1	-0.28	28.611	34.582	27.804	1451.6
281.3	278.9	-0.22	28.691	34.617	27.828	1452.0
288.2	285.7	-0.14	28.779	34.644	27.847	1452.8
295.1	292.5	-0.12	28.816	34.682	27.880	1452.8
300.7	299.1	-0.05	28.893	34.684	27.874	1453.2
306.1	303.4	0.01	28.963	34.705	27.888	1453.6

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
11		X	233	2230	Helo	71 13.5	134 19.0
12		X	233	2300	Helo	71 29.5	134 15.0

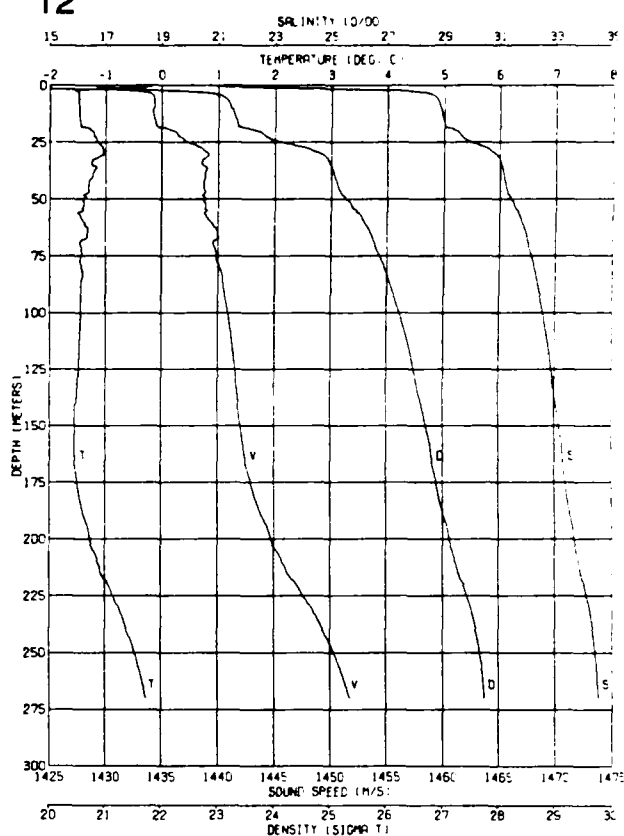
11



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	-1.40	1433.6	22.78	28.31
10.1	-1.29	1434.5	23.04	28.64
15.1	-1.12	1436.4	23.62	29.36
20.3	-1.00	1438.7	24.59	30.56
25.1	-1.12	1439.0	24.97	31.03
30.2	-1.23	1438.8	25.03	31.14
35.1	-1.31	1438.5	25.06	31.21
40.1	-1.43	1438.2	25.12	31.25
45.5	-1.51	1437.9	25.16	31.25
50.0	-1.44	1438.5	25.33	31.47
55.3	-1.41	1439.1	25.56	31.75
60.2	-1.38	1439.7	25.74	31.98
65.2	-1.41	1439.7	25.79	32.03
70.2	-1.37	1440.0	25.84	32.10
75.1	-1.45	1439.9	25.88	32.14
80.3	-1.44	1440.0	25.90	32.17
85.0	-1.41	1440.3	25.94	32.22
90.2	-1.42	1440.4	25.97	32.26
95.1	-1.44	1440.4	26.01	32.30
100.2	-1.45	1440.5	26.04	32.34
110.3	-1.45	1440.9	26.13	32.46
120.0	-1.45	1441.2	26.27	32.63
130.0	-1.49	1441.5	26.42	32.81
140.1	-1.51	1441.7	26.51	32.93
150.2	-1.52	1442.0	26.61	33.05
160.2	-1.53	1442.3	26.70	33.15
170.4	-1.52	1442.6	26.77	33.24
180.0	-1.50	1442.9	26.83	33.32
190.4	-1.44	1443.6	26.94	33.46
200.2	-1.35	1444.3	27.04	33.59
210.3	-1.20	1445.4	27.17	33.76
220.1	-1.03	1446.6	27.31	33.93
230.2	-.87	1447.7	27.44	34.10
240.5	-.70	1448.9	27.56	34.25
250.3	-.55	1449.9	27.65	34.37
260.1	-.42	1450.8	27.70	34.44
270.4	-.30	1451.6	27.74	34.50
277.2	-.23	1452.1	27.76	34.53

12

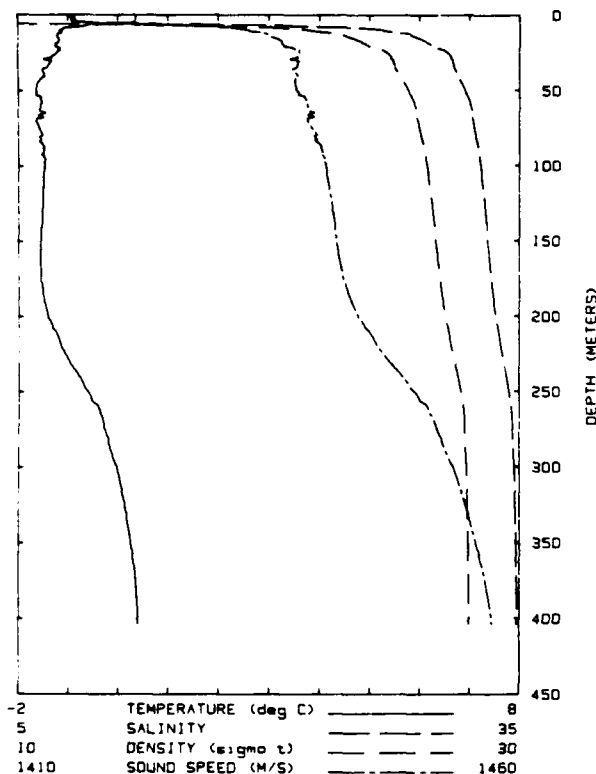


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

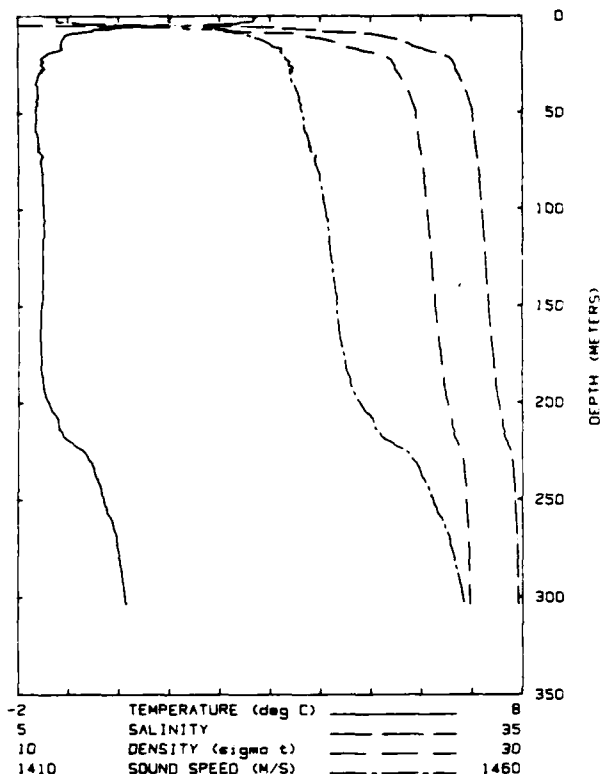
5.1	-1.49	1434.3	23.09	28.70
10.1	-1.48	1434.3	23.21	28.85
15.1	-1.47	1434.4	23.31	28.97
20.1	-1.24	1436.1	23.71	29.47
25.1	-1.14	1437.4	24.16	30.03
30.2	-1.03	1439.2	24.82	30.85
35.0	-1.25	1438.6	24.99	31.05
40.1	-1.24	1438.9	25.06	31.14
45.1	-1.32	1438.7	25.13	31.22
50.3	-1.41	1438.7	25.29	31.42
55.3	-1.39	1439.1	25.46	31.63
60.1	-1.39	1439.4	25.59	31.80
65.2	-1.33	1439.9	25.72	31.95
70.3	-1.46	1439.6	25.79	32.03
75.4	-1.45	1439.9	25.88	32.15
80.5	-1.44	1440.1	25.96	32.25
85.0	-1.42	1440.4	26.02	32.33
90.3	-1.45	1440.5	26.09	32.41
95.3	-1.44	1440.7	26.16	32.49
100.4	-1.45	1440.9	26.23	32.58
110.3	-1.47	1441.1	26.34	32.71
120.0	-1.49	1441.4	26.43	32.83
130.1	-1.51	1441.6	26.52	32.93
140.1	-1.53	1441.8	26.61	33.04
150.1	-1.56	1442.0	26.69	33.15
160.1	-1.56	1442.3	26.78	33.25
170.4	-1.53	1442.7	26.85	33.34
180.4	-1.47	1443.2	26.92	33.43
190.0	-1.39	1443.9	27.01	33.55
200.2	-1.28	1444.6	27.11	33.68
210.1	-1.14	1445.8	27.23	33.82
220.3	-.93	1447.1	27.37	34.01
230.1	-.75	1448.4	27.51	34.19
240.5	-.61	1449.4	27.60	34.31
250.1	-.47	1450.3	27.67	34.40
260.5	-.35	1451.1	27.72	34.47
270.0	-.27	1451.8	27.73	34.49
270.0	-.27	1451.8	27.73	34.49

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
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14	X		234	0820	Ship	70 30.1	136 48.7

13



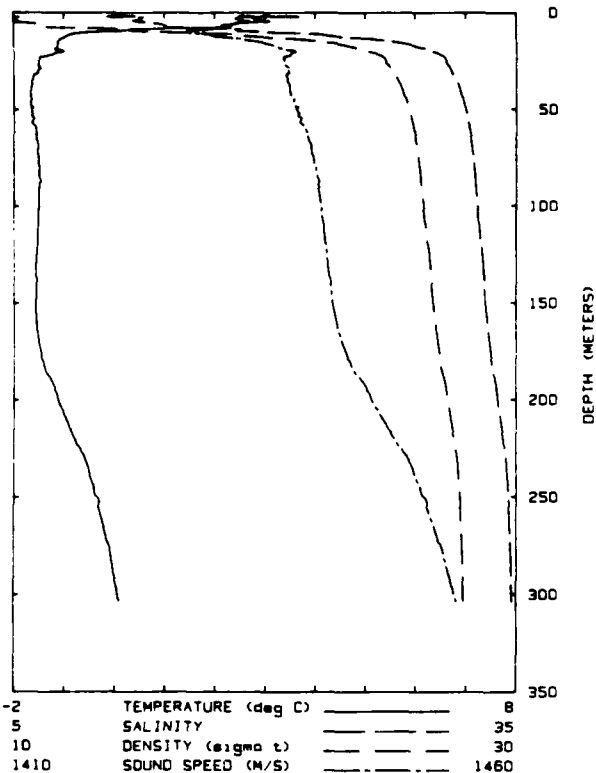
14



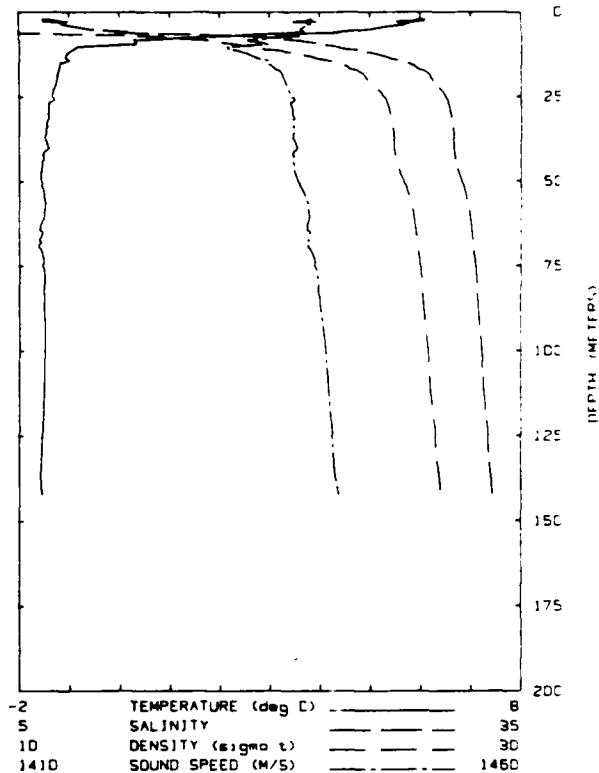
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	-0.35	7.892	8.411	6.742	1415.4
6.5	6.4	-0.07	12.154	13.576	10.896	1422.3
11.7	11.7	-1.16	22.438	27.393	22.029	1433.6
17.1	17.0	-1.18	23.779	29.200	23.489	1436.1
22.9	22.8	-1.19	24.583	30.291	24.371	1437.6
28.8	28.6	-1.32	24.940	30.914	24.877	1437.9
34.8	34.6	-1.40	25.000	31.078	25.011	1437.8
40.9	40.6	-1.48	25.140	31.341	25.226	1437.9
47.1	46.8	-1.63	25.212	31.598	25.436	1437.6
52.7	52.4	-1.64	25.348	31.795	25.597	1437.9
58.4	58.0	-1.52	25.602	32.015	25.772	1438.8
64.5	64.1	-1.52	25.719	32.177	25.898	1439.2
70.6	70.2	-1.63	25.874	32.225	25.944	1438.8
76.8	76.3	-1.56	25.799	32.309	26.011	1439.4
82.4	81.9	-1.55	25.883	32.417	26.098	1439.6
88.2	87.6	-1.48	26.000	32.499	26.163	1441.2
94.2	93.6	-1.48	26.066	32.586	26.233	1441.4
100.4	99.7	-1.48	26.115	32.645	26.281	1441.6
106.6	105.9	-1.50	26.167	32.731	26.351	1441.7
112.2	111.5	-1.49	26.211	32.782	26.392	1441.8
118.0	117.2	-1.51	26.245	32.844	26.443	1441.0
124.0	123.2	-1.51	26.289	32.908	26.495	1441.2
130.2	129.3	-1.52	26.315	32.952	26.531	1441.3
136.2	135.3	-1.52	26.358	33.006	26.575	1441.4
142.8	140.8	-1.54	26.375	33.043	26.605	1441.5
147.4	146.3	-1.55	26.392	33.078	26.634	1441.6
153.4	152.3	-1.55	26.435	33.135	26.680	1441.7
159.6	158.5	-1.56	26.474	33.191	26.726	1441.9
165.5	164.3	-1.56	26.503	33.224	26.752	1442.0
171.1	169.9	-1.55	26.544	33.271	26.790	1442.2
176.7	175.4	-1.56	26.572	33.311	26.823	1442.3
182.7	181.3	-1.52	26.638	33.362	26.863	1442.7
188.7	187.3	-1.50	26.709	33.429	26.916	1443.0
194.7	193.2	-1.45	26.806	33.508	26.979	1443.4
200.2	198.7	-1.42	26.888	33.578	27.035	1443.7
205.8	204.2	-1.34	27.014	33.666	27.104	1444.0
211.9	210.3	-1.28	27.161	33.763	27.180	1444.8
218.1	216.4	-1.19	27.273	33.833	27.235	1445.5
224.3	222.5	-1.11	27.406	33.928	27.309	1446.0
229.9	228.0	-1.02	27.548	34.018	27.379	1446.7
235.7	233.8	-0.91	27.736	34.138	27.471	1447.5
242.0	240.1	-0.79	27.827	34.250	27.557	1448.3
248.6	246.6	-0.88	28.087	34.348	27.630	1449.0
255.4	253.2	-0.55	28.259	34.433	27.696	1449.8
261.4	259.2	-0.41	28.454	34.527	27.765	1450.7
268.9	264.7	-0.36	28.512	34.545	27.778	1451.1
272.4	270.1	-0.30	28.594	34.583	27.805	1451.5
277.9	275.5	-0.25	28.654	34.608	27.823	1451.8
283.4	280.9	-0.19	28.719	34.624	27.833	1452.2
288.9	286.4	-0.17	28.756	34.642	27.847	1452.4
294.3	291.8	-0.12	28.816	34.663	27.861	1452.8
299.9	297.3	-0.07	28.885	34.680	27.880	1453.2
305.2	302.6	-0.02	28.941	34.704	27.888	1453.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
15	X		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6

15



16

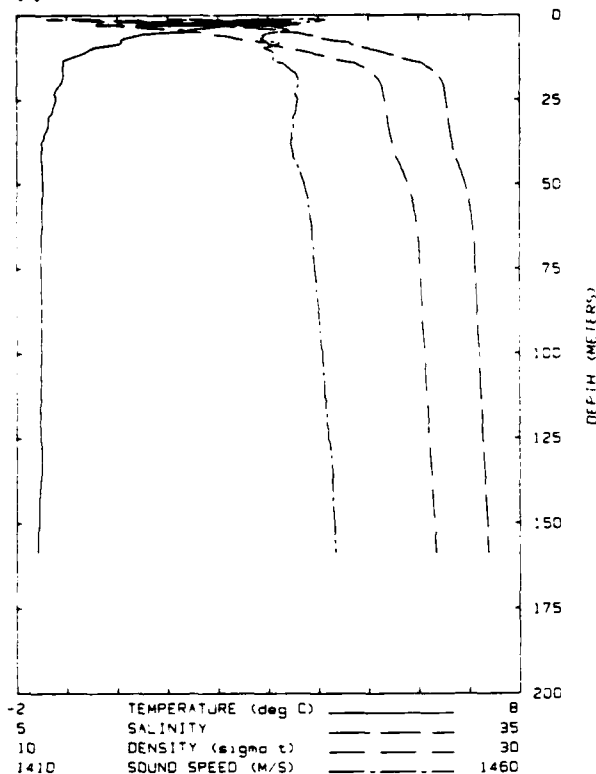


PRESSURE dBar	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.4	2.4	3.53	11.089	10.942	6.769	1433.6
2.4	2.4	3.01	12.191	12.344	8.898	1433.0
6.7	6.7	2.21	13.355	13.968	11.209	1431.6
12.2	12.2	-0.93	19.871	23.806	19.133	1429.9
18.4	18.3	-1.14	23.878	29.296	23.566	1436.4
25.6	25.5	-1.49	24.788	30.853	24.831	1436.9
32.7	32.5	-1.40	25.025	31.317	25.208	1437.1
39.9	39.7	-1.65	25.250	31.878	25.502	1437.1
46.7	46.4	-1.86	25.406	31.903	25.684	1437.8
53.9	53.6	-1.65	25.544	32.078	25.824	1438.2
60.8	60.5	-1.57	25.720	32.221	25.940	1439.0
67.9	67.5	-1.52	25.865	32.362	26.053	1439.5
74.8	74.3	-1.50	25.852	32.459	26.131	1439.8
81.7	81.2	-1.49	26.019	32.535	26.193	1440.1
88.6	88.1	-1.47	26.069	32.583	26.231	1440.3
95.4	94.8	-1.50	26.101	32.655	26.290	1440.4
102.8	102.0	-1.50	26.156	32.722	26.344	1440.6
109.3	108.6	-1.51	26.207	32.797	26.405	1440.8
116.4	115.6	-1.52	26.256	32.874	26.468	1441.0
123.1	122.2	-1.54	26.315	32.970	26.546	1441.1
130.3	129.4	-1.56	26.348	33.034	26.598	1441.2
137.2	136.3	-1.56	26.392	33.098	26.650	1441.4
144.2	143.1	-1.55	26.433	33.133	26.678	1441.6
150.8	148.8	-1.57	26.460	33.187	26.722	1441.7
158.0	156.9	-1.56	26.531	33.269	26.788	1442.0
165.0	163.8	-1.54	26.586	33.336	26.843	1442.3
171.8	170.5	-1.50	26.682	33.422	26.912	1442.7
178.9	177.6	-1.45	26.805	33.513	26.984	1443.2
186.1	184.7	-1.37	26.954	33.625	27.072	1443.8
193.0	191.5	-1.22	27.212	33.805	27.213	1444.9
199.8	198.3	-1.13	27.356	33.896	27.283	1445.5
207.2	205.6	-1.02	27.533	34.009	27.371	1446.3
213.9	212.3	-0.82	27.703	34.123	27.460	1447.0
221.3	219.5	-0.78	27.895	34.235	27.545	1447.9
228.3	226.5	-0.66	28.095	34.348	27.629	1448.8
234.4	232.5	-0.55	28.253	34.435	27.697	1449.5
240.1	238.1	-0.49	28.331	34.489	27.722	1449.9
246.0	244.0	-0.42	28.431	34.515	27.756	1450.4
252.1	250.0	-0.35	28.518	34.553	27.783	1450.9
257.8	255.7	-0.31	28.577	34.577	27.801	1451.2
263.9	261.7	-0.24	28.658	34.610	27.824	1451.7
270.2	267.9	-0.19	28.722	34.631	27.839	1452.0
276.4	274.0	-0.12	28.807	34.658	27.857	1452.5
282.4	280.0	-0.07	28.885	34.680	27.872	1452.8
288.3	285.8	-0.04	28.910	34.696	27.883	1453.1
294.5	292.0	0.01	28.964	34.713	27.895	1453.4
300.9	298.3	0.08	29.025	34.731	27.906	1453.8
305.6	303.0	0.10	29.073	34.747	27.917	1454.1

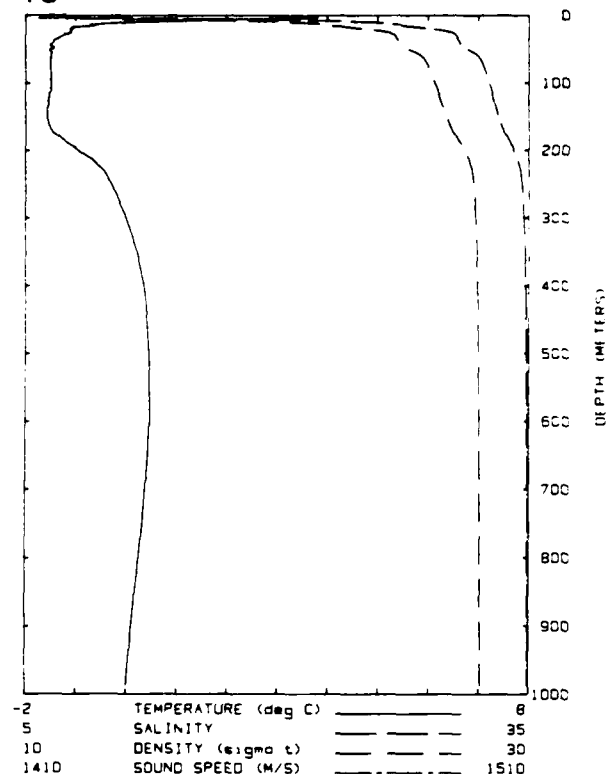
PRESSURE dBar	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.6	2.6	5.97	7.599	6.782	5.376	1435.0
2.0	2.0	6.07	7.331	6.506	5.154	1435.1
2.3	2.3	8.10	7.373	6.540	5.179	1435.3
7.1	7.1	2.32	17.451	18.608	14.905	1436.1
13.0	12.9	-1.06	21.996	26.702	21.471	1433.2
19.3	19.2	-1.24	24.025	28.593	23.807	1436.3
25.7	25.6	-1.30	24.710	30.579	24.605	1437.5
32.0	31.8	-1.43	24.828	30.870	24.843	1437.3
38.6	38.3	-1.45	24.918	31.014	24.960	1437.5
45.1	44.9	-1.54	24.954	31.152	25.074	1437.4
51.0	50.7	-1.54	25.229	31.522	25.373	1438.0
57.4	57.1	-1.49	25.509	31.847	25.626	1438.8
63.7	63.4	-1.58	25.595	32.059	25.809	1439.7
70.0	69.5	-1.61	25.660	32.178	25.906	1439.9
76.4	75.9	-1.51	25.839	32.313	26.013	1439.9
82.4	81.8	-1.50	25.914	32.401	26.084	1439.9
88.6	88.1	-1.50	25.979	32.487	26.154	1440.1
94.3	93.7	-1.49	26.050	32.571	26.222	1440.3
100.5	99.8	-1.50	26.115	32.664	26.297	1440.5
106.1	105.4	-1.50	26.164	32.728	26.349	1440.7
111.8	111.1	-1.50	26.198	32.780	26.391	1440.8
117.5	116.7	-1.52	26.256	32.872	26.466	1441.0
123.2	122.3	-1.54	26.332	32.891	26.563	1441.2
128.7	127.8	-1.55	26.372	33.059	26.618	1441.3
134.1	133.2	-1.57	26.413	33.131	26.677	1441.4
139.7	138.8	-1.57	26.500	33.248	26.772	1441.6
143.3	142.3	-1.55	26.547	33.295	26.809	1441.8
142.3	141.3	-1.58	26.530	33.277	26.795	1441.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0

17



18

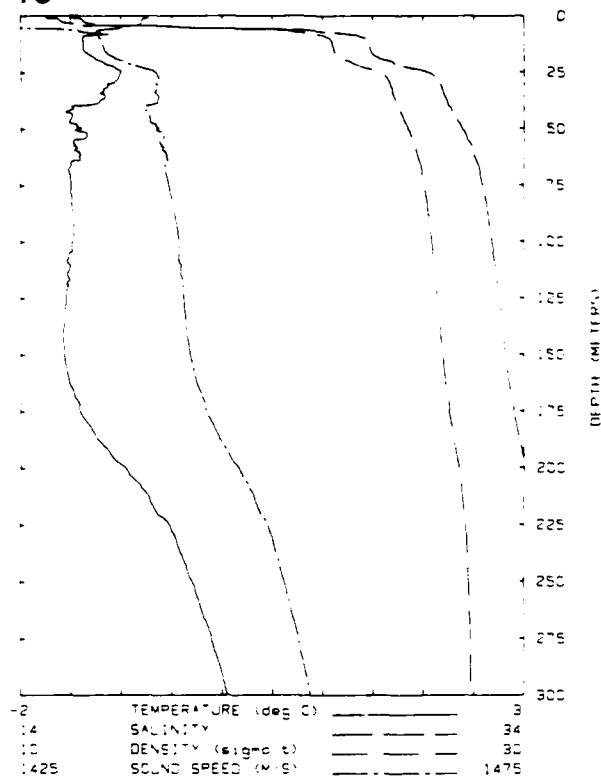


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.9	1.9	2.17	16.386	17.488	14.002	1435.9
5.2	5.1	1.07	19.768	20.956	18.816	1435.4
9.2	9.2	-0.13	21.510	25.282	20.312	1435.6
15.1	15.0	-1.07	23.985	28.371	23.625	1436.8
21.0	20.9	-1.15	24.748	30.478	24.521	1438.0
27.6	27.4	-1.27	24.820	30.695	24.699	1437.8
34.1	33.9	-1.40	24.838	30.849	24.826	1437.5
40.7	40.5	-1.50	24.956	31.114	25.043	1437.5
46.8	46.5	-1.49	25.285	31.549	25.394	1438.2
52.6	52.3	-1.48	25.521	31.858	25.644	1438.8
58.7	58.3	-1.49	25.699	32.109	25.848	1439.2
64.7	64.3	-1.50	25.781	32.244	25.957	1439.4
70.8	70.1	-1.51	25.838	32.321	26.020	1439.5
76.3	75.8	-1.51	25.883	32.374	26.063	1439.7
82.1	81.6	-1.52	25.913	32.418	26.098	1439.8
87.1	86.5	-1.50	25.956	32.460	26.132	1440.1
92.8	92.2	-1.51	25.992	32.513	26.175	1440.3
98.2	97.6	-1.52	26.033	32.577	26.227	1440.3
103.8	103.0	-1.52	26.071	32.624	26.265	1440.4
108.7	108.0	-1.51	26.106	32.660	26.294	1440.6
114.2	113.4	-1.52	26.138	32.718	26.341	1440.7
119.7	118.9	-1.52	26.183	32.773	26.386	1440.9
125.1	124.3	-1.52	26.219	32.812	26.418	1441.0
130.7	129.8	-1.49	26.281	32.869	26.463	1441.3
135.8	134.8	-1.50	26.317	32.924	26.508	1441.4
140.9	139.9	-1.53	26.337	32.977	26.552	1441.5
146.2	145.2	-1.55	26.358	33.031	26.595	1441.5
151.4	150.3	-1.56	26.390	33.081	26.636	1441.6
156.2	155.2	-1.57	26.411	33.120	26.669	1441.7
159.8	158.4	-1.58	26.435	33.158	26.699	1441.8

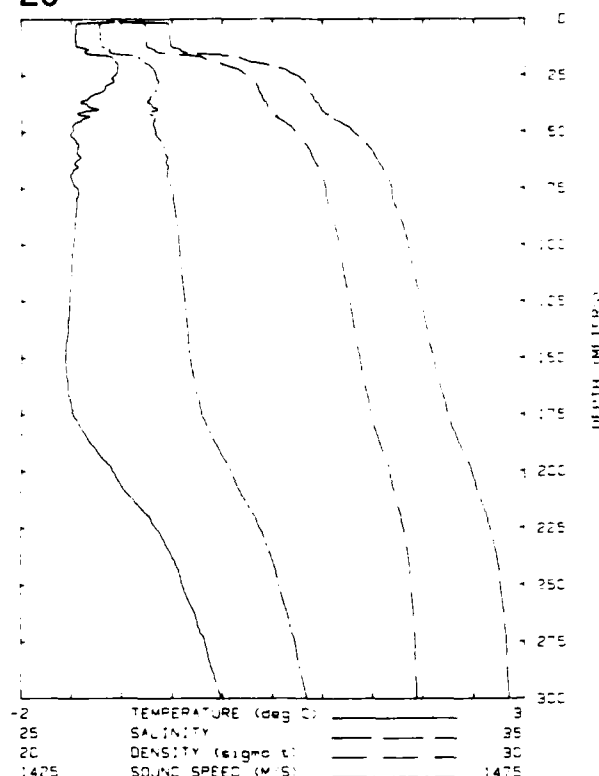
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.0	3.8	3.82	7.882	7.525	6.045	1437.5
9.1	8.1	0.97	21.114	23.901	18.175	1438.9
14.1	14.1	-0.72	22.531	27.116	21.799	1435.4
19.0	18.8	-1.05	23.391	28.555	22.966	1435.6
24.3	24.1	-1.12	24.500	30.113	24.225	1437.7
30.1	30.0	-1.22	24.828	30.857	24.667	1438.0
37.0	35.6	-1.36	24.823	30.787	24.775	1437.6
41.7	41.5	-1.45	24.845	30.906	24.873	1437.4
47.1	46.8	-1.49	24.897	31.154	25.074	1437.7
53.0	52.7	-1.52	25.240	31.515	25.368	1438.1
57.0	56.7	-1.47	25.482	31.780	25.589	1438.8
63.5	63.1	-1.50	25.657	32.081	25.809	1439.1
69.6	69.2	-1.51	25.759	32.205	25.926	1439.4
75.3	74.9	-1.50	25.833	32.284	25.997	1439.6
81.7	81.2	-1.50	25.912	32.385	26.079	1439.9
88.2	87.6	-1.49	25.980	32.477	26.145	1440.1
94.6	94.0	-1.49	26.024	32.546	26.201	1440.3
100.7	100.0	-1.48	26.091	32.619	26.259	1440.5
106.4	105.7	-1.49	26.145	32.899	26.326	1440.7
112.8	112.0	-1.50	26.185	32.786	26.380	1440.9
119.2	118.4	-1.52	26.230	32.838	26.438	1440.9
125.5	124.8	-1.53	26.262	32.890	26.481	1441.1
131.7	130.8	-1.55	26.303	32.959	26.538	1441.2
137.3	136.3	-1.58	26.354	33.039	26.603	1441.3
143.7	142.7	-1.57	26.398	33.108	26.658	1441.5
150.1	149.0	-1.56	26.451	33.170	26.708	1441.7
156.4	155.3	-1.58	26.525	33.261	26.782	1441.9
162.5	161.3	-1.54	26.594	33.332	26.839	1442.2
168.2	167.0	-1.51	26.806	33.419	26.909	1442.6
174.5	173.2	-1.46	26.791	33.508	26.980	1443.0
180.6	179.3	-1.32	27.052	33.700	27.131	1444.1
186.5	185.1	-1.24	27.190	33.786	27.207	1444.7
192.5	191.0	-1.11	27.391	33.825	27.307	1445.5
198.3	196.7	-0.99	27.573	34.038	27.394	1446.3
204.5	202.8	-0.90	27.730	34.128	27.483	1447.0
211.1	208.5	-0.74	27.853	34.284	27.567	1448.0
217.7	218.0	-0.63	28.122	34.381	27.641	1448.8
223.6	221.8	-0.58	28.228	34.418	27.694	1449.3
238.0	227.2	-0.47	28.348	34.480	27.730	1449.8
234.5	232.8	-0.42	28.426	34.518	27.757	1450.2
239.9	238.0	-0.37	28.490	34.548	27.780	1450.6
245.2	243.2	-0.35	28.527	34.583	27.791	1450.8
250.6	248.5	-0.30	28.567	34.588	27.809	1451.1
255.8	253.7	-0.27	28.628	34.603	27.820	1451.4
261.7	259.8	-0.23	28.673	34.622	27.833	1451.7
267.8	265.6	-0.19	28.728	34.641	27.846	1452.0
274.2	271.8	-0.18	28.767	34.655	27.856	1452.3
280.7	278.3	-0.12	28.812	34.670	27.867	1452.5
286.4	284.0	-0.09	28.852	34.683	27.875	1452.8
292.0	289.5	-0.06	28.894	34.695	27.884	1453.1
297.4	294.8	-0.02	28.924	34.707	27.891	1453.3
302.8	300.2	0.00	28.963	34.716	27.898	1453.5
308.0	305.3	0.02	28.990	34.724	27.902	1453.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
19	X		235	0240	Ship	71 1.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0

19



20

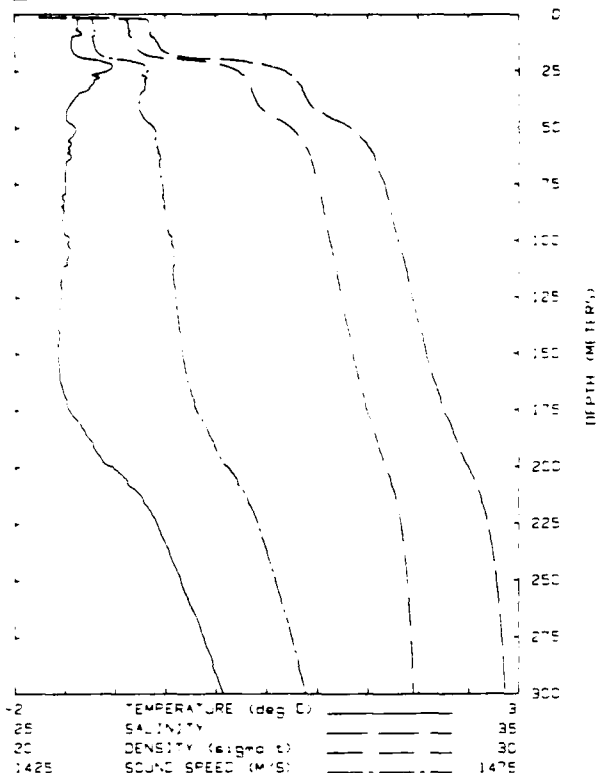


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.9	0.9	-0.74	13.102	15.057	12.076	1418.9
2.0	2.0	-0.79	13.480	15.553	12.475	1419.3
5.1	5.1	-0.99	17.115	20.281	16.289	1424.7
8.4	8.3	-1.12	22.133	26.946	21.668	1433.2
11.9	11.9	-1.38	22.611	27.823	22.379	1433.2
17.2	17.1	-1.32	22.773	27.987	22.511	1433.7
22.0	21.9	-1.13	23.726	28.085	23.395	1436.2
27.3	27.1	-1.02	24.844	30.478	24.518	1438.7
32.4	32.3	-1.17	24.936	30.747	24.739	1438.4
38.2	38.0	-1.21	25.074	30.975	24.924	1438.6
43.9	43.6	-1.49	25.079	31.258	25.159	1437.8
49.5	49.2	-1.44	25.308	31.534	25.379	1438.4
54.9	54.6	-1.38	25.506	31.735	25.543	1439.1
59.7	59.7	-1.46	25.624	31.978	25.741	1439.1
65.7	65.3	-1.50	25.737	32.170	25.897	1439.3
71.5	71.1	-1.50	25.838	32.303	26.005	1439.6
77.3	76.8	-1.49	25.933	32.417	26.097	1439.9
82.7	82.1	-1.49	26.000	32.508	26.171	1440.1
88.0	87.4	-1.48	26.058	32.574	26.224	1440.3
93.8	93.2	-1.47	26.122	32.644	26.280	1440.5
99.5	98.8	-1.47	26.180	32.725	26.346	1440.7
105.2	104.5	-1.47	26.229	32.781	26.399	1440.9
110.5	109.8	-1.52	26.250	32.869	26.464	1440.9
115.8	115.1	-1.53	26.278	32.917	26.503	1441.0
121.6	120.7	-1.53	26.328	32.978	26.553	1441.1
127.3	126.4	-1.54	26.364	33.040	26.603	1441.3
133.0	132.0	-1.56	26.384	33.103	26.654	1441.3
138.4	137.4	-1.57	26.431	33.156	26.697	1441.5
143.8	142.8	-1.57	26.464	33.202	26.735	1441.6
149.4	148.3	-1.57	26.510	33.256	26.776	1441.8
155.2	154.0	-1.55	26.571	33.318	26.828	1442.0
160.9	159.8	-1.53	26.636	33.379	26.876	1442.3
166.3	165.0	-1.49	26.728	33.455	26.938	1442.7
171.5	170.2	-1.44	26.842	33.552	27.015	1443.2
177.1	175.8	-1.39	26.927	33.620	27.089	1443.5
182.8	181.4	-1.31	27.083	33.731	27.156	1444.2
188.5	187.1	-1.24	27.204	33.814	27.221	1444.7
194.0	192.6	-1.12	27.387	33.931	27.312	1445.5
199.4	197.9	-1.02	27.557	34.046	27.401	1446.2
205.1	203.5	-0.90	27.738	34.154	27.484	1447.0
211.0	209.4	-0.78	27.918	34.255	27.562	1447.8
216.9	215.2	-0.70	28.032	34.320	27.612	1448.4
222.3	220.5	-0.63	28.144	34.385	27.660	1448.9
227.1	225.3	-0.51	28.294	34.453	27.710	1449.6
232.1	230.2	-0.46	28.388	34.491	27.738	1450.0
237.2	235.3	-0.43	28.416	34.516	27.757	1450.2
242.1	240.1	-0.39	28.480	34.548	27.781	1450.6
247.2	245.2	-0.34	28.542	34.575	27.801	1450.9
252.2	250.1	-0.29	28.604	34.601	27.820	1451.2
257.5	255.3	-0.26	28.654	34.623	27.835	1451.5
262.7	260.5	-0.22	28.699	34.636	27.844	1451.8
268.0	265.8	-0.19	28.744	34.654	27.857	1452.1
273.7	271.4	-0.13	28.808	34.674	27.870	1452.4
279.3	277.0	-0.10	28.845	34.685	27.877	1452.7
285.1	282.7	-0.05	28.902	34.704	27.891	1453.0
290.8	288.4	-0.01	28.950	34.717	27.898	1453.3
297.0	294.4	0.02	28.989	34.728	27.906	1453.6
303.2	300.6	0.07	29.039	34.742	27.915	1453.9

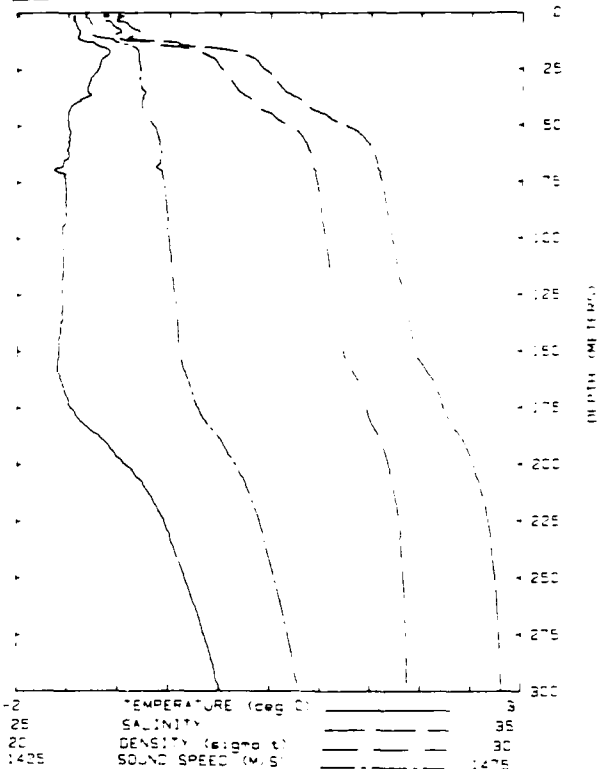
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.6	2.6	-1.45	22.641	27.940	22.474	1432.8
8.4	8.4	-1.46	22.853	27.959	22.490	1432.9
15.2	15.1	-1.36	22.967	28.286	22.753	1433.9
21.9	21.8	-1.04	24.585	30.126	24.234	1438.0
28.7	28.5	-1.10	24.916	30.848	24.657	1438.6
35.3	35.1	-1.33	24.872	30.821	24.802	1437.8
42.3	42.1	-1.44	24.955	31.051	24.990	1437.7
49.2	49.0	-1.48	25.303	31.565	25.407	1438.3
56.2	55.9	-1.43	25.584	31.888	25.668	1439.1
63.2	62.8	-1.44	25.734	32.101	25.840	1439.4
70.0	69.6	-1.51	25.827	32.297	26.000	1439.5
77.0	76.5	-1.43	25.964	32.393	26.076	1440.1
84.2	83.7	-1.45	26.008	32.471	26.140	1440.3
91.6	91.0	-1.46	26.085	32.605	26.248	1440.5
98.2	97.6	-1.47	26.151	32.687	26.315	1440.6
104.9	104.2	-1.49	26.187	32.752	26.368	1440.8
111.6	110.9	-1.50	26.230	32.814	26.419	1440.9
118.3	117.5	-1.51	26.272	32.879	26.471	1441.1
123.3	122.5	-1.52	26.312	32.943	26.523	1441.2
124.4	123.5	-1.52	26.319	32.954	26.533	1441.2
125.2	124.3	-1.52	26.319	32.955	26.533	1441.2
131.8	130.7	-1.53	26.362	33.021	26.587	1441.4
138.0	137.1	-1.53	26.400	33.074	26.630	1441.5
144.1	143.1	-1.55	26.437	33.140	26.684	1441.6
150.4	149.4	-1.55	26.493	33.218	26.747	1441.8
157.0	155.8	-1.55	26.532	33.262	26.783	1442.0
163.4	162.2	-1.54	26.603	33.341	26.847	1442.3
169.7	168.5	-1.51	26.684	33.425	26.914	1442.6
176.3	175.0	-1.48	26.784	33.491	26.966	1442.9
183.1	181.7	-1.40	26.915	33.602	27.054	1443.6
189.7	188.3	-1.30	27.086	33.736	27.180	1444.4
196.5	195.0	-1.18	27.286	33.872	27.266	1445.2
203.4	201.8	-1.07	27.471	33.979	27.349	1446.0
210.3	208.6	-0.97	27.630	34.082	27.428	1446.7
217.0	215.3	-0.83	27.839	34.198	27.517	1447.6
223.6	221.9	-0.70	28.013	34.289	27.586	1448.4
230.7	228.8	-0.60	28.184	34.378	27.653	1449.1
236.8	234.9	-0.53	28.269	34.434	27.696	1449.6
243.0	241.0	-0.47	28.361	34.478	27.728	1450.1
248.8	246.8	-0.41	28.441	34.519	27.759	1450.5
255.6	253.5	-0.37	28.502	34.550	27.782	1450.9
262.1	259.9	-0.30	28.587	34.585	27.807	1451.3
268.4	266.2	-0.25	28.655	34.610	27.825	1451.7
275.5	273.2	-0.18	28.740	34.642	27.847	1452.2
282.3	279.9	-0.14	28.781	34.660	27.859	1452.5
289.3	286.8	-0.10	28.836	34.674	27.869	1452.8
295.2	292.6	-0.06	28.889	34.689	27.879	1453.1
300.7	298.1	-0.02	28.936	34.704	27.889	1453.4
304.8	302.1	0.01	28.970	34.713	27.895	1453.6

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
21	X		236	0437	Ship	71 9.0	141 24.6
22	X		236	1242	Ship	71 1.2	142 36.4

21



22

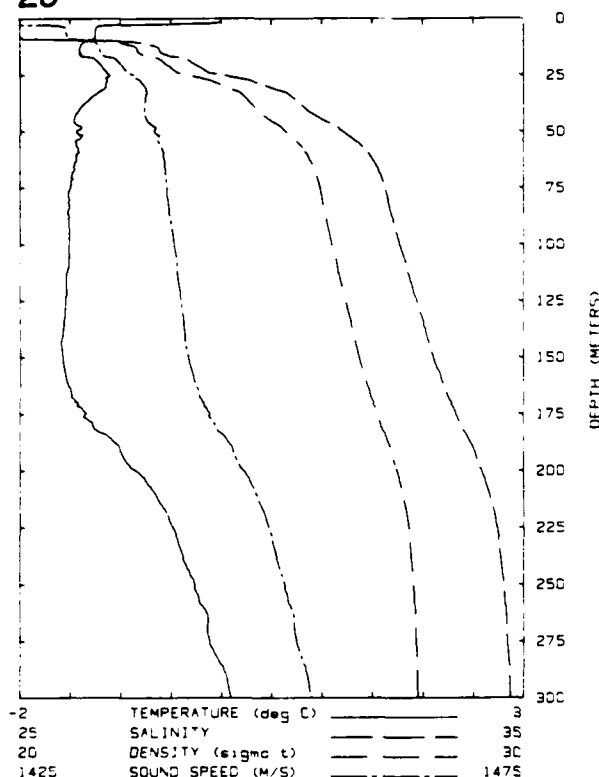


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.7	1.7	-1.26	21.622	26.397	21.226	1431.6
7.0	7.0	-1.39	22.512	27.706	22.285	1432.0
13.1	13.0	-1.44	22.591	27.855	22.405	1432.9
19.1	19.0	-1.35	23.044	28.380	22.829	1434.1
25.6	25.4	-1.09	24.733	30.395	24.452	1438.2
32.9	32.7	-1.25	24.844	30.706	24.708	1438.0
40.1	39.8	-1.45	24.805	30.852	24.829	1437.4
47.3	47.1	-1.40	25.189	31.411	25.282	1438.1
53.7	53.4	-1.42	25.535	31.817	25.610	1439.0
60.9	60.5	-1.45	25.701	32.068	25.814	1439.3
68.3	67.9	-1.50	25.769	32.207	25.927	1439.4
75.7	75.2	-1.50	25.870	32.343	26.037	1439.7
83.0	82.5	-1.51	25.917	32.415	26.086	1439.9
89.3	88.8	-1.51	25.971	32.487	26.154	1440.1
96.7	96.0	-1.51	26.027	32.558	26.212	1440.3
104.0	103.4	-1.45	26.152	32.664	26.296	1440.8
111.4	110.7	-1.48	26.190	32.738	26.357	1440.9
118.5	117.7	-1.54	26.197	32.815	26.421	1440.8
125.1	124.2	-1.53	26.250	32.873	26.467	1441.0
132.4	131.5	-1.58	26.292	32.953	26.533	1441.2
139.8	138.8	-1.57	26.345	33.038	26.602	1441.3
147.1	146.1	-1.58	26.409	33.130	26.676	1441.5
153.8	152.7	-1.57	26.484	33.196	26.729	1441.7
160.7	159.5	-1.56	26.540	33.281	26.788	1442.0
168.0	166.8	-1.53	26.649	33.389	26.885	1442.5
175.3	174.0	-1.48	26.767	33.492	26.967	1442.9
182.6	181.2	-1.35	26.880	33.654	27.095	1443.9
188.9	187.5	-1.26	27.130	33.745	27.166	1444.5
196.1	194.6	-1.18	27.300	33.873	27.266	1445.2
203.4	201.8	-0.98	27.584	34.030	27.387	1446.5
210.6	209.0	-0.83	27.816	34.181	27.504	1447.5
218.0	216.2	-0.71	28.000	34.283	27.581	1448.3
224.1	222.4	-0.81	28.143	34.363	27.642	1448.0
230.7	228.8	-0.55	28.235	34.415	27.681	1448.4
236.8	234.8	-0.48	28.342	34.477	27.728	1448.9
243.0	241.0	-0.43	28.415	34.514	27.756	1449.3
249.1	247.1	-0.37	28.500	34.550	27.782	1449.8
255.3	253.1	-0.33	28.558	34.579	27.799	1450.1
261.6	259.4	-0.26	28.638	34.607	27.823	1450.5
268.0	265.7	-0.19	28.726	34.641	27.847	1450.2
274.5	272.2	-0.14	28.787	34.659	27.859	1450.4
281.3	278.9	-0.09	28.843	34.678	27.871	1450.7
287.6	285.1	-0.04	28.908	34.696	27.884	1450.1
294.0	291.5	0.01	28.982	34.714	27.896	1450.4
300.3	297.7	0.05	29.018	34.729	27.905	1450.8
306.3	303.7	0.10	29.072	34.745	27.916	1450.1
312.3	314.5	0.17	29.148	34.782	27.926	1450.6
318.5	325.6	0.22	29.210	34.780	27.937	1450.0
324.5	332.5	0.27	29.271	34.784	27.946	1450.5

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.2	1.2	-1.42	22.033	27.089	21.786	1431.8
1.2	1.2	-1.40	22.035	27.079	21.778	1431.8
4.1	4.1	-1.39	22.156	27.230	21.900	1432.2
9.6	9.6	-1.36	22.275	27.357	22.002	1432.6
15.6	15.5	-1.09	23.712	29.031	23.351	1436.2
21.5	21.4	-1.15	24.264	29.825	23.994	1437.1
27.7	27.5	-1.22	24.422	30.108	24.223	1437.2
33.5	33.3	-1.28	24.539	30.310	24.395	1437.3
39.4	39.2	-1.37	24.752	30.696	24.702	1437.5
45.6	45.3	-1.47	25.041	31.199	25.110	1437.8
52.2	51.9	-1.46	25.475	31.770	25.573	1438.7
58.9	58.6	-1.46	25.684	32.058	25.805	1439.2
65.3	64.9	-1.50	25.744	32.175	25.901	1439.3
72.0	71.5	-1.48	25.808	32.245	25.957	1439.6
78.7	78.2	-1.49	25.873	32.335	26.030	1439.8
85.4	84.9	-1.49	25.914	32.391	26.076	1439.9
92.0	91.4	-1.48	25.965	32.445	26.119	1440.2
98.5	97.8	-1.52	25.977	32.498	26.163	1440.2
105.1	104.4	-1.51	26.025	32.552	26.206	1440.4
111.8	111.0	-1.52	26.060	32.603	26.248	1440.5
118.4	117.6	-1.52	26.102	32.653	26.297	1440.7
124.8	124.0	-1.53	26.141	32.722	26.345	1440.8
131.4	130.5	-1.52	26.197	32.784	26.395	1441.1
138.0	137.1	-1.54	26.233	32.852	26.451	1441.2
144.7	143.7	-1.56	26.263	32.908	26.496	1441.3
151.3	150.2	-1.58	26.313	32.976	26.551	1441.5
157.5	156.4	-1.57	26.425	33.141	26.685	1441.7
164.2	163.0	-1.54	26.609	33.350	26.853	1442.3
170.6	169.3	-1.49	26.728	33.458	26.940	1442.8
177.1	175.8	-1.41	26.879	33.576	27.034	1443.4
183.5	182.2	-1.30	27.063	33.700	27.131	1444.2
189.8	188.4	-1.14	27.336	33.909	27.295	1445.4
196.3	194.8	-1.01	27.583	34.044	27.399	1446.2
202.7	201.2	-0.86	27.770	34.156	27.485	1447.2
209.3	207.7	-0.73	27.980	34.238	27.562	1448.0
215.8	214.1	-0.64	28.103	34.341	27.625	1448.7
222.3	220.5	-0.56	28.215	34.406	27.674	1449.2
228.5	226.7	-0.50	28.317	34.462	27.716	1449.7
234.1	232.3	-0.44	28.387	34.493	27.738	1450.1
239.5	237.6	-0.40	28.448	34.525	27.763	1450.4
244.8	242.9	-0.36	28.507	34.555	27.784	1450.7
250.8	248.7	-0.31	28.576	34.581	27.804	1451.1
257.3	255.1	-0.26	28.641	34.608	27.823	1451.5
263.7	261.5	-0.20	28.710	34.634	27.841	1451.9
270.2	267.9	-0.15	28.773	34.655	27.856	1452.2
276.6	274.3	-0.11	28.816	34.666	27.865	1452.5
282.3	279.8	-0.07	28.870	34.685	27.876	1452.8
288.0	285.5	-0.04	28.908	34.698	27.883	1453.1
293.8	291.4	0.00	28.958	34.711	27.894	1453.4
299.9	297.3	0.04	29.003	34.726	27.904	1453.7
305.5	302.9	0.08	29.046	34.737	27.911	1454.0

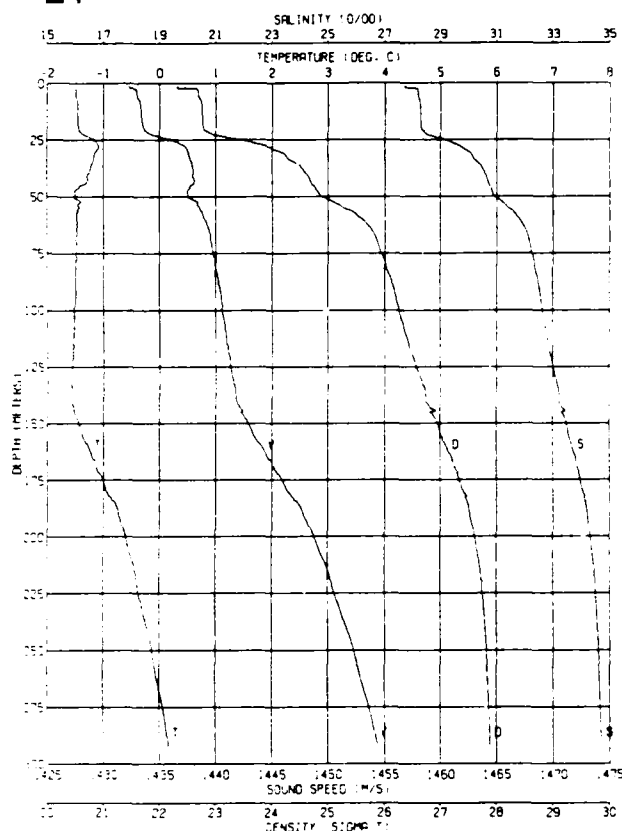
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	Helo	71 42.9	134 15.0

23



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.9	1.9	-0.02	2.841	2.862	2.234	1406.2
6.8	6.7	-1.25	20.447	24.826	19.957	1429.6
13.3	13.2	-1.41	22.540	27.756	22.326	1432.9
19.9	19.8	-1.21	23.172	28.420	22.859	1434.9
26.5	26.4	-1.15	23.887	28.318	23.584	1436.5
33.2	33.0	-1.23	24.588	30.309	24.386	1437.6
39.8	39.6	-1.40	24.698	30.658	24.670	1437.3
46.6	46.3	-1.46	25.011	31.147	25.068	1437.8
53.1	53.0	-1.40	25.392	31.592	25.427	1438.8
60.1	59.7	-1.41	25.810	31.804	25.680	1439.3
66.7	66.3	-1.47	25.721	32.110	25.846	1439.4
73.3	72.8	-1.48	25.790	32.228	25.944	1439.5
80.1	79.6	-1.52	25.831	32.308	26.009	1439.6
86.7	86.2	-1.53	25.871	32.368	26.058	1439.8
93.4	92.8	-1.51	25.949	32.456	26.129	1440.1
100.0	99.4	-1.51	26.009	32.536	26.194	1440.3
106.8	106.1	-1.51	26.080	32.623	26.269	1440.5
113.6	112.8	-1.54	26.132	32.729	26.346	1440.6
120.3	119.5	-1.54	26.193	32.805	26.413	1440.8
126.9	126.0	-1.55	26.258	32.901	26.490	1441.0
133.7	132.7	-1.56	26.319	32.992	26.564	1441.2
140.3	139.3	-1.57	26.368	33.072	26.629	1441.4
147.1	146.0	-1.59	26.415	33.152	26.695	1441.5
153.7	152.6	-1.57	26.496	33.240	26.766	1441.8
160.3	159.2	-1.54	26.613	33.384	26.865	1442.2
167.1	165.8	-1.49	26.737	33.474	26.953	1442.7
173.9	172.6	-1.38	26.833	33.619	27.068	1443.5
180.8	178.5	-1.27	27.120	33.745	27.186	1444.3
187.7	186.3	-1.09	27.398	33.915	27.298	1445.5
194.8	193.3	-0.99	27.589	34.050	27.403	1446.3
202.0	200.5	-0.84	27.804	34.176	27.500	1447.3
209.3	207.7	-0.70	28.000	34.279	27.577	1448.2
216.6	214.8	-0.60	28.153	34.372	27.649	1448.9
223.5	221.8	-0.52	28.282	34.444	27.703	1449.5
230.3	228.5	-0.45	28.386	34.503	27.747	1450.0
236.8	234.7	-0.40	28.451	34.564	27.789	1450.4
242.8	240.8	-0.36	28.514	34.533	27.793	1450.7
248.6	246.6	-0.30	28.582	34.597	27.816	1451.1
254.7	252.6	-0.26	28.641	34.615	27.829	1451.4
261.8	259.6	-0.18	28.735	34.646	27.850	1451.8
269.2	266.8	-0.14	28.790	34.663	27.862	1452.3
276.4	274.0	-0.12	28.818	34.678	27.873	1452.5
283.3	280.8	-0.08	28.887	34.698	27.886	1452.8
289.5	287.0	0.02	28.881	34.725	27.904	1453.4
295.8	293.2	0.07	28.932	34.736	27.910	1453.8
302.1	299.5	0.10	29.068	34.744	27.915	1454.0
308.2	305.6	0.12	29.093	34.750	27.919	1454.2
314.4	311.8	0.16	29.138	34.784	27.928	1454.5
320.5	317.7	0.20	29.185	34.776	27.935	1454.8

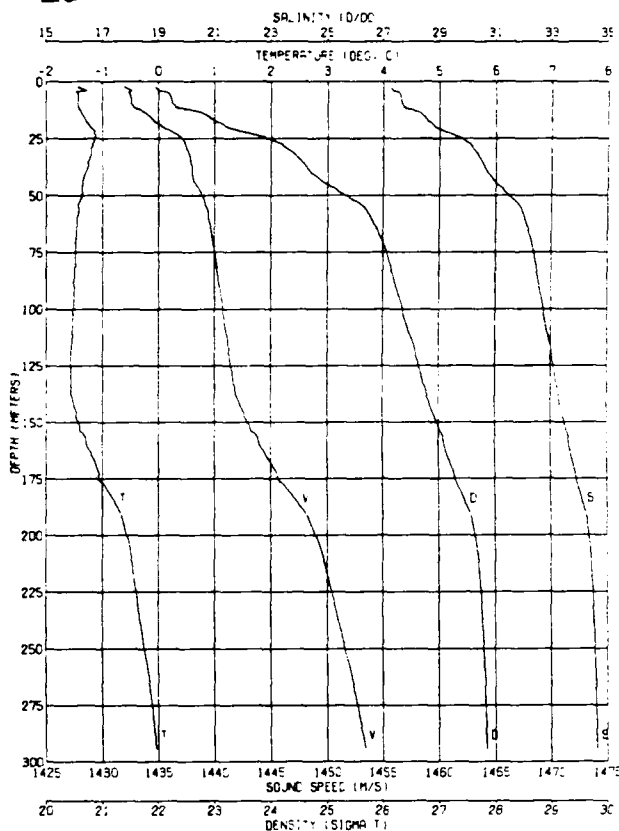
24



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	-1.49	1433.0	22.69	28.20
10.1	-1.46	1433.3	22.75	28.27
15.0	-1.46	1433.4	22.75	28.28
20.1	-1.44	1433.6	22.78	28.31
25.2	-1.15	1436.2	23.51	29.22
30.1	-1.13	1437.5	24.12	29.97
35.4	-1.20	1437.9	24.43	30.37
40.2	-1.28	1437.9	24.62	30.60
45.4	-1.42	1437.7	24.76	30.76
50.0	-1.51	1437.6	24.89	30.93
55.1	-1.43	1438.6	25.29	31.41
60.3	-1.47	1439.1	25.61	31.82
65.3	-1.47	1439.4	25.78	32.03
70.3	-1.48	1439.6	25.88	32.14
75.1	-1.49	1439.8	25.94	32.22
80.2	-1.49	1440.0	26.03	32.33
85.0	-1.49	1440.2	26.10	32.42
90.3	-1.49	1440.4	26.17	32.51
95.2	-1.49	1440.5	26.21	32.56
100.2	-1.53	1440.6	26.27	32.62
110.1	-1.53	1440.9	26.37	32.76
121.0	-1.54	1441.3	26.52	32.94
130.3	-1.57	1441.5	26.66	33.11
140.2	-1.56	1441.9	26.75	33.22
150.4	-1.44	1442.9	26.97	33.49
160.2	-1.27	1444.1	27.11	33.67
170.4	-1.11	1445.3	27.27	33.87
180.3	-0.94	1446.5	27.41	34.06
190.3	-0.73	1447.8	27.52	34.21
200.1	-0.59	1448.8	27.61	34.33
210.3	-0.47	1449.7	27.69	34.43
220.3	-0.39	1450.3	27.74	34.49
230.1	-0.31	1450.9	27.77	34.54
240.2	-0.21	1451.6	27.80	34.58
250.4	-0.13	1452.3	27.82	34.62
260.2	-0.06	1452.8	27.84	34.64
270.0	0.02	1453.3	27.86	34.67
280.0	0.09	1453.8	27.87	34.69
290.3	0.15	1454.3	27.88	34.71
292.2	0.16	1454.4	27.88	34.70

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
25		X	236	1800	Helo	71 29.5	142 58.0
26		X	236	1845	Helo	71 14.0	142 59.0

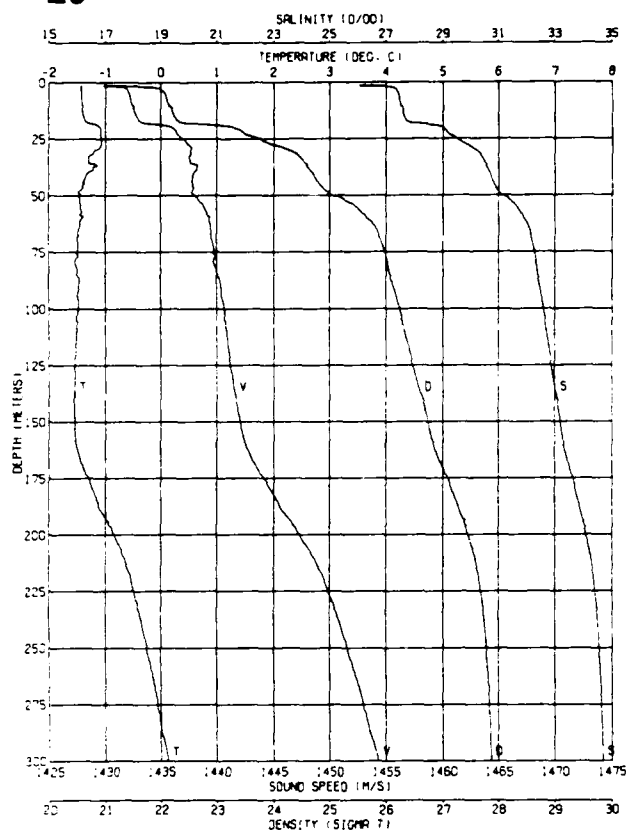
25



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.44	1432.4	22.19	27.58
10.4	-1.43	1432.7	22.29	27.71
15.3	-1.33	1434.2	22.89	28.45
20.1	-1.21	1435.4	23.23	28.88
25.1	-1.15	1437.1	23.99	29.81
30.1	-1.19	1437.6	24.33	30.23
35.0	-1.25	1437.8	24.54	30.49
40.3	-1.31	1438.0	24.73	30.72
45.3	-1.35	1438.4	25.01	31.08
50.4	-1.36	1439.0	25.35	31.49
55.1	-1.43	1439.3	25.66	31.88
60.5	-1.46	1439.5	25.79	32.04
65.2	-1.46	1439.7	25.91	32.19
70.2	-1.48	1439.9	26.00	32.30
75.1	-1.49	1440.0	26.07	32.38
80.3	-1.49	1440.2	26.13	32.45
85.4	-1.50	1440.3	26.19	32.52
90.2	-1.51	1440.4	26.23	32.58
95.3	-1.52	1440.6	26.30	32.66
100.1	-1.53	1440.7	26.36	32.74
110.2	-1.55	1441.0	26.47	32.87
120.3	-1.56	1441.3	26.59	33.03
130.0	-1.57	1441.6	26.70	33.16
140.3	-1.53	1442.1	26.82	33.31
150.3	-1.43	1443.0	26.96	33.48
160.2	-1.28	1444.1	27.11	33.67
170.5	-1.10	1445.3	27.24	33.84
180.4	-.90	1446.6	27.39	34.03
190.3	-.68	1448.1	27.55	34.24
200.4	-.56	1449.0	27.64	34.36
210.3	-.49	1449.7	27.69	34.43
220.3	-.43	1450.2	27.72	34.47
230.9	-.37	1450.7	27.76	34.52
240.6	-.31	1451.1	27.77	34.54
250.2	-.25	1451.6	27.79	34.57
260.3	-.19	1452.1	27.81	34.59
270.3	-.14	1452.5	27.82	34.61
280.0	-.10	1452.9	27.83	34.62
290.1	-.05	1453.3	27.84	34.64
294.5	-.04	1453.4	27.83	34.63

26

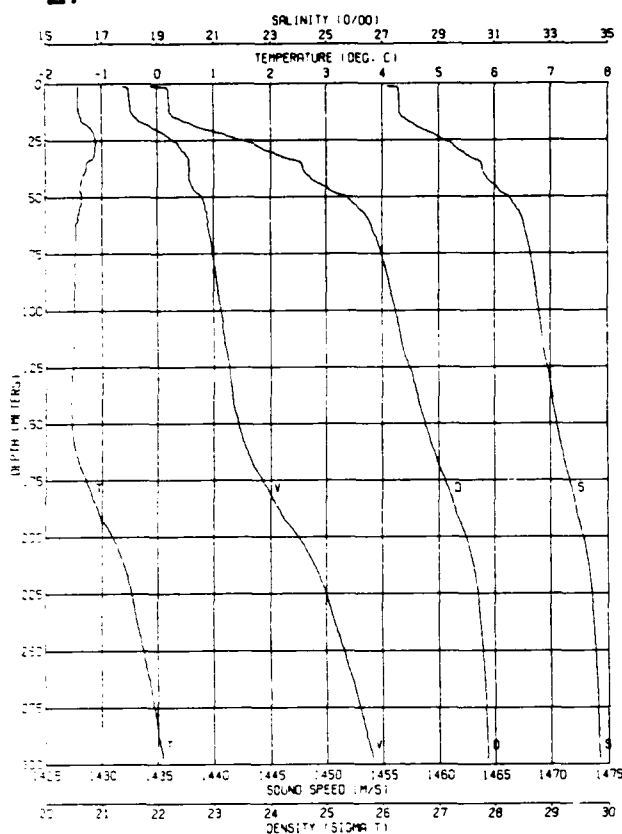


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	-1.44	1432.2	22.08	27.44
10.4	-1.42	1432.5	22.15	27.53
15.3	-1.39	1432.9	22.24	27.65
20.1	-1.09	1436.0	23.31	28.98
25.2	-1.07	1437.0	23.76	29.53
30.2	-1.18	1437.6	24.29	30.19
35.0	-1.31	1437.6	24.54	30.50
40.1	-1.33	1437.9	24.71	30.70
45.0	-1.41	1437.8	24.82	30.84
50.0	-1.47	1438.1	25.07	31.15
55.3	-1.45	1438.9	25.49	31.66
60.1	-1.44	1439.3	25.67	31.88
65.3	-1.49	1439.5	25.84	32.10
70.0	-1.50	1439.6	25.92	32.19
75.3	-1.52	1439.7	25.99	32.28
80.3	-1.54	1439.8	26.03	32.33
85.1	-1.51	1440.0	26.06	32.37
90.1	-1.48	1440.4	26.13	32.46
95.3	-1.49	1440.5	26.19	32.53
100.2	-1.49	1440.7	26.25	32.60
110.5	-1.52	1440.9	26.34	32.71
120.0	-1.55	1441.1	26.43	32.83
130.4	-1.55	1441.4	26.52	32.94
140.2	-1.57	1441.7	26.65	33.09
150.4	-1.55	1442.1	26.73	33.20
160.4	-1.52	1442.5	26.83	33.32
170.1	-1.41	1443.5	26.99	33.52
180.3	-1.21	1444.8	27.16	33.74
190.4	-1.06	1445.9	27.31	33.93
200.1	-.84	1447.3	27.46	34.13
210.2	-.66	1448.6	27.58	34.29
220.6	-.53	1449.6	27.66	34.39
230.2	-.42	1450.3	27.71	34.46
240.3	-.34	1451.0	27.75	34.52
250.2	-.25	1451.6	27.78	34.56
260.3	-.16	1452.2	27.81	34.60
270.4	-.08	1452.8	27.83	34.63
280.1	-.02	1453.3	27.85	34.65
290.1	.05	1453.8	27.86	34.67
300.1	.12	1454.3	27.88	34.70
300.7	.12	1454.3	27.88	34.70

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
27		X	236	2257	Helo	71 10.2	143 36.0
28		X	236	2342	Helo	71 35.0	143 35.3

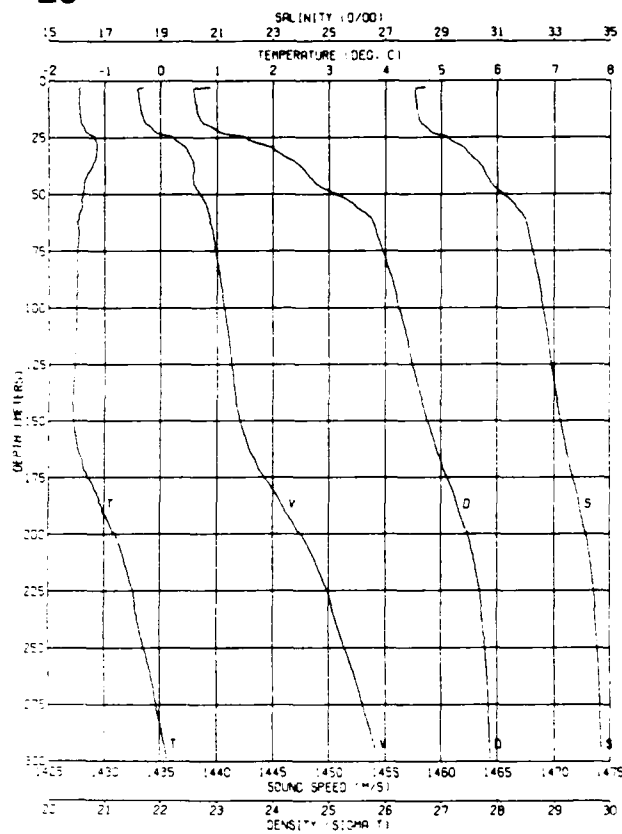
27



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	-1.43	1432.5	22.21	27.60
10.1	-1.42	1432.6	22.22	27.62
15.1	-1.37	1433.1	22.36	27.80
20.1	-1.18	1434.9	22.85	28.41
25.4	-1.11	1436.5	23.55	29.27
30.5	-1.14	1437.4	24.06	29.90
35.1	-1.28	1437.8	24.56	30.52
40.1	-1.34	1437.8	24.66	30.64
45.1	-1.40	1438.0	24.95	31.00
50.2	-1.36	1439.0	25.39	31.55
55.2	-1.40	1439.3	25.59	31.79
60.5	-1.44	1439.5	25.78	32.02
65.1	-1.46	1439.6	25.84	32.10
70.0	-1.46	1439.8	25.93	32.21
75.3	-1.49	1439.9	25.99	32.29
80.3	-1.49	1440.0	26.05	32.36
85.5	-1.49	1440.2	26.10	32.42
90.4	-1.50	1440.3	26.14	32.47
95.5	-1.49	1440.5	26.19	32.54
100.5	-1.50	1440.7	26.24	32.60
110.2	-1.52	1440.9	26.33	32.70
120.4	-1.51	1441.2	26.41	32.80
130.4	-1.55	1441.4	26.55	32.97
140.2	-1.56	1441.7	26.64	33.09
150.2	-1.54	1442.1	26.76	33.23
160.2	-1.50	1442.7	26.88	33.39
170.1	-1.37	1443.7	27.04	33.58
180.2	-1.21	1444.9	27.19	33.77
190.4	-1.04	1446.0	27.32	33.95
200.1	-.80	1447.5	27.49	34.16
210.2	-.63	1448.7	27.60	34.30
220.1	-.52	1449.6	27.67	34.40
230.2	-.42	1450.3	27.72	34.47
240.3	-.34	1451.0	27.76	34.52
250.5	-.24	1451.7	27.79	34.57
260.2	-.18	1452.2	27.81	34.60
270.0	-.10	1452.7	27.83	34.63
280.1	-.02	1453.3	27.85	34.65
290.1	.03	1453.7	27.86	34.67
297.4	.09	1454.1	27.85	34.66

28

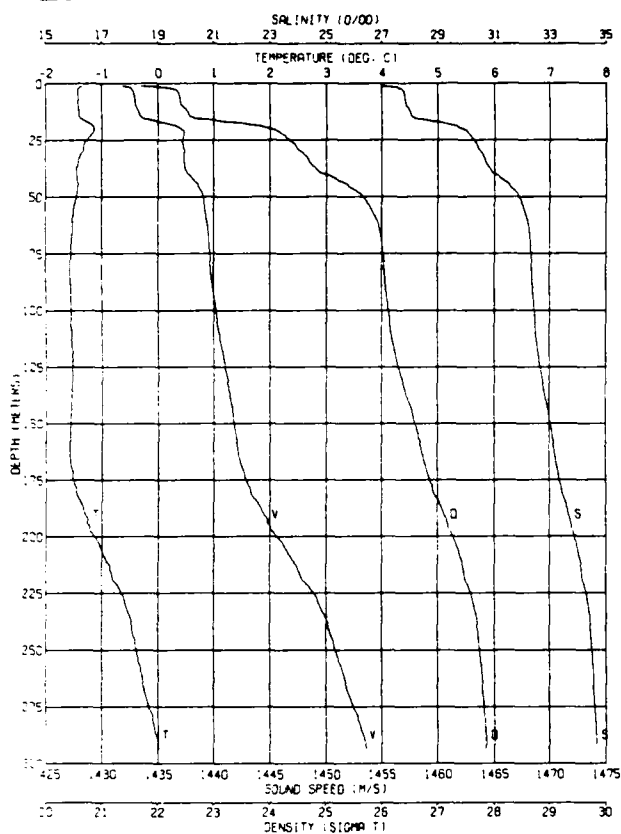


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.44	1433.1	22.59	28.07
10.3	-1.45	1433.2	22.62	28.12
15.1	-1.44	1433.4	22.66	28.17
20.5	-1.37	1434.2	22.91	28.48
25.2	-1.17	1436.1	23.53	29.24
30.2	-1.14	1437.3	24.03	29.86
35.0	-1.18	1437.8	24.34	30.25
40.1	-1.29	1437.8	24.59	30.55
45.3	-1.37	1437.9	24.76	30.77
50.3	-1.38	1438.5	25.15	31.25
55.4	-1.40	1439.1	25.49	31.67
60.1	-1.46	1439.3	25.73	31.96
65.3	-1.45	1439.6	25.83	32.09
70.0	-1.46	1439.7	25.89	32.16
75.1	-1.48	1439.9	25.97	32.26
80.2	-1.48	1440.0	26.03	32.33
85.3	-1.48	1440.2	26.10	32.41
90.2	-1.49	1440.4	26.15	32.48
95.1	-1.49	1440.5	26.20	32.54
100.2	-1.50	1440.7	26.25	32.60
110.1	-1.51	1441.0	26.36	32.74
120.0	-1.53	1441.2	26.44	32.84
130.4	-1.55	1441.4	26.54	32.96
140.1	-1.57	1441.7	26.65	33.10
150.3	-1.55	1442.1	26.77	33.24
160.2	-1.49	1442.8	26.89	33.40
170.5	-1.38	1443.6	27.02	33.56
180.0	-1.19	1444.9	27.19	33.78
190.2	-1.02	1446.1	27.32	33.95
200.4	-.79	1447.6	27.48	34.15
210.3	-.65	1448.6	27.58	34.28
220.1	-.54	1449.5	27.66	34.36
231.9	-.44	1450.3	27.73	34.48
240.1	-.38	1450.8	27.75	34.51
250.3	-.28	1451.4	27.79	34.56
260.3	-.17	1452.2	27.82	34.61
270.0	-.11	1452.7	27.83	34.63
280.4	-.02	1453.3	27.85	34.66
290.4	.06	1453.8	27.87	34.68
299.0	.12	1454.3	27.86	34.68

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
29		X	237	0015	Helo	71 25.0	143 34.0
30		X	237	0613	Ship	70 44.4	144 48.8

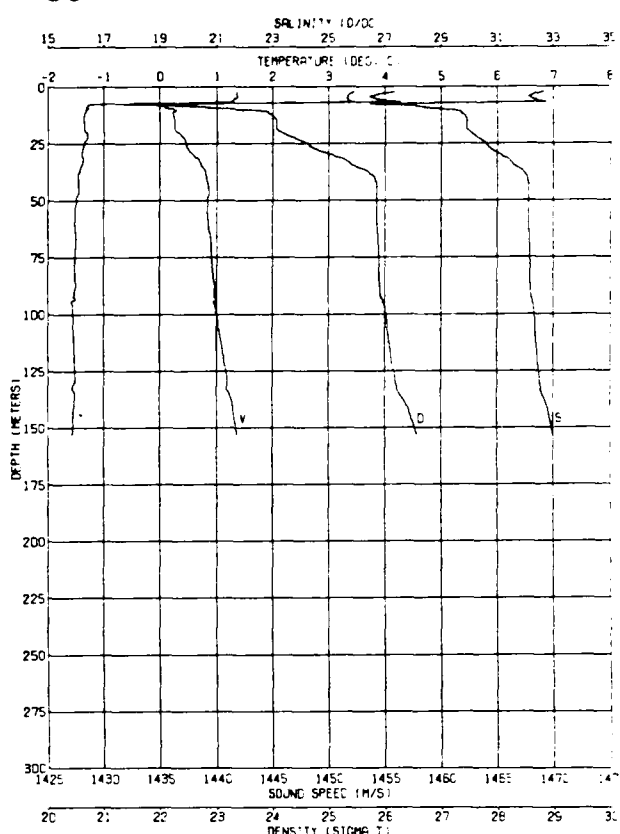
29



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	-1.42	1432.8	22.38	27.82
10.3	-1.42	1433.0	22.45	27.91
15.5	-1.37	1433.7	22.69	28.20
20.3	-1.14	1437.1	24.04	29.87
25.4	-1.28	1437.3	24.38	30.30
30.3	-1.35	1437.4	24.58	30.55
35.3	-1.42	1437.4	24.72	30.71
40.2	-1.44	1437.8	24.99	31.04
45.1	-1.43	1438.6	25.39	31.54
50.3	-1.46	1439.1	25.68	31.90
55.3	-1.49	1439.2	25.82	32.07
60.3	-1.52	1439.4	25.92	32.20
65.4	-1.52	1439.5	25.97	32.26
70.4	-1.54	1439.6	26.00	32.30
75.0	-1.54	1439.6	26.02	32.32
80.3	-1.56	1439.7	26.04	32.34
85.0	-1.56	1439.8	26.05	32.36
90.1	-1.55	1439.9	26.07	32.38
95.5	-1.56	1440.0	26.10	32.41
100.7	-1.56	1440.2	26.12	32.45
110.5	-1.53	1440.5	26.17	32.51
120.0	-1.53	1440.8	26.25	32.60
130.4	-1.53	1441.2	26.37	32.75
140.1	-1.55	1441.5	26.48	32.89
150.3	-1.56	1441.8	26.60	33.03
161.0	-1.57	1442.1	26.71	33.17
170.1	-1.53	1442.6	26.80	33.28
180.3	-1.46	1443.3	26.93	33.44
190.5	-1.29	1444.5	27.12	33.69
200.2	-1.12	1445.7	27.28	33.89
210.2	-0.94	1447.0	27.42	34.07
220.2	-0.77	1448.1	27.51	34.19
230.5	-0.58	1449.4	27.64	34.37
240.5	-0.48	1450.2	27.70	34.44
250.3	-0.39	1450.9	27.75	34.50
260.3	-0.30	1451.5	27.78	34.55
270.3	-0.22	1452.1	27.80	34.58
280.4	-0.11	1452.9	27.84	34.63
290.2	-0.01	1453.5	27.86	34.66
293.5	.02	1453.7	27.84	34.64

30

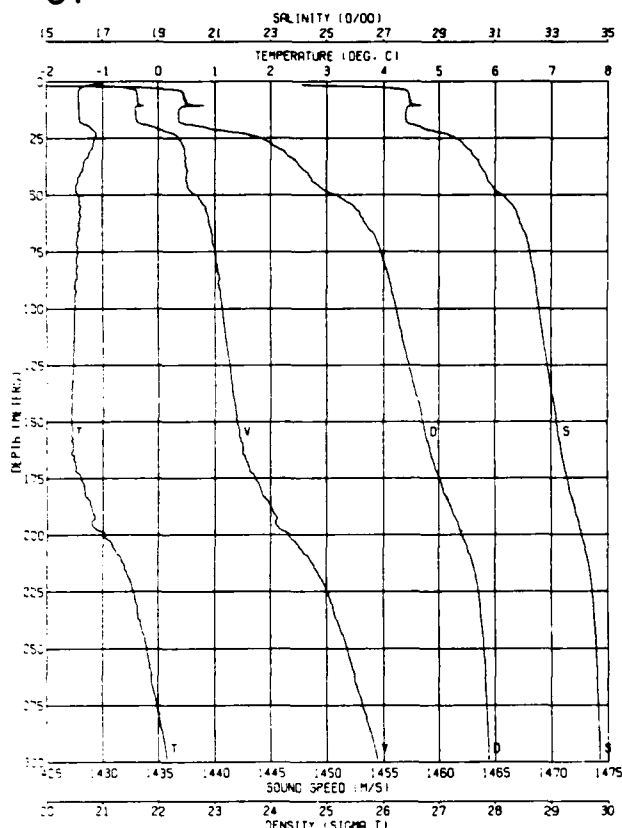


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	1.33	1451.7	25.81	32.22
10.1	-1.29	1436.6	23.39	29.08
15.1	-1.36	1436.5	24.03	29.87
20.4	-1.30	1436.9	24.17	30.03
25.4	-1.36	1437.5	24.62	30.59
30.2	-1.39	1438.1	25.08	31.16
36.7	-1.42	1439.1	25.66	31.88
40.3	-1.46	1439.2	25.81	32.06
46.4	-1.46	1439.3	25.85	32.11
50.6	-1.50	1439.2	25.84	32.10
58.9	-1.52	1439.3	25.86	32.12
60.3	-1.52	1439.3	25.86	32.12
65.1	-1.49	1439.5	25.87	32.14
70.2	-1.50	1439.5	25.88	32.15
75.4	-1.51	1439.6	25.89	32.16
80.1	-1.51	1439.7	25.90	32.17
85.1	-1.51	1439.7	25.91	32.18
90.3	-1.53	1439.8	25.93	32.20
95.2	-1.59	1439.8	26.00	32.29
100.2	-1.56	1440.0	26.02	32.32
110.3	-1.54	1440.3	26.07	32.38
120.4	-1.53	1440.6	26.11	32.43
130.0	-1.52	1440.9	26.18	32.51
140.1	-1.53	1441.4	26.38	32.76
150.2	-1.56	1441.7	26.52	32.94
153.2	-1.58	1441.7	26.56	32.99

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
31		X	237	1043	Ship	71 8.7	145 15.9
32		X	237	1804	Helo	71 13.3	144 45.0

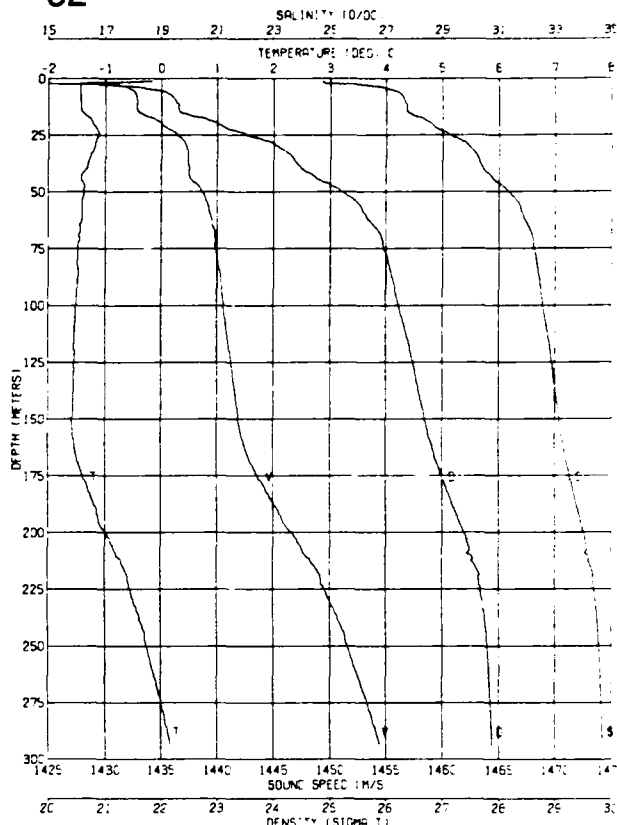
31



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.43	1433.1	22.45	27.91
10.3	-1.43	1433.3	22.59	28.08
15.3	-1.42	1433.0	22.36	27.79
20.4	-1.21	1434.7	22.85	28.40
25.2	-1.15	1436.8	23.85	29.64
30.2	-1.22	1437.3	24.20	30.07
35.1	-1.32	1437.4	24.47	30.40
40.2	-1.39	1437.5	24.67	30.65
45.8	-1.47	1437.6	24.86	30.88
50.0	-1.39	1438.5	25.17	31.28
55.3	-1.39	1439.1	25.50	31.67
60.1	-1.40	1439.4	25.63	31.84
65.1	-1.41	1439.7	25.75	31.99
70.2	-1.45	1439.8	25.88	32.15
75.1	-1.44	1440.0	25.95	32.23
80.1	-1.47	1440.1	26.01	32.31
85.0	-1.46	1440.3	26.08	32.39
90.1	-1.50	1440.3	26.13	32.46
95.1	-1.49	1440.5	26.18	32.52
100.1	-1.49	1440.7	26.23	32.58
110.2	-1.51	1440.9	26.32	32.69
120.0	-1.53	1441.1	26.41	32.81
130.1	-1.54	1441.4	26.51	32.92
140.4	-1.56	1441.7	26.62	33.06
150.4	-1.56	1442.0	26.72	33.18
160.4	-1.53	1442.5	26.83	33.31
170.5	-1.48	1443.1	26.94	33.45
180.0	-1.32	1444.1	27.07	33.62
190.2	-1.18	1445.3	27.24	33.84
200.1	-.97	1446.6	27.39	34.04
210.3	-.67	1448.5	27.58	34.28
220.2	-.50	1449.6	27.67	34.40
230.1	-.40	1450.4	27.73	34.48
240.1	-.31	1451.1	27.76	34.53
250.2	-.21	1451.8	27.80	34.57
260.4	-.13	1452.4	27.82	34.61
270.3	-.06	1452.9	27.84	34.64
280.0	.02	1453.5	27.86	34.67
290.3	.10	1454.1	27.87	34.69
299.1	.14	1454.4	27.87	34.70

32

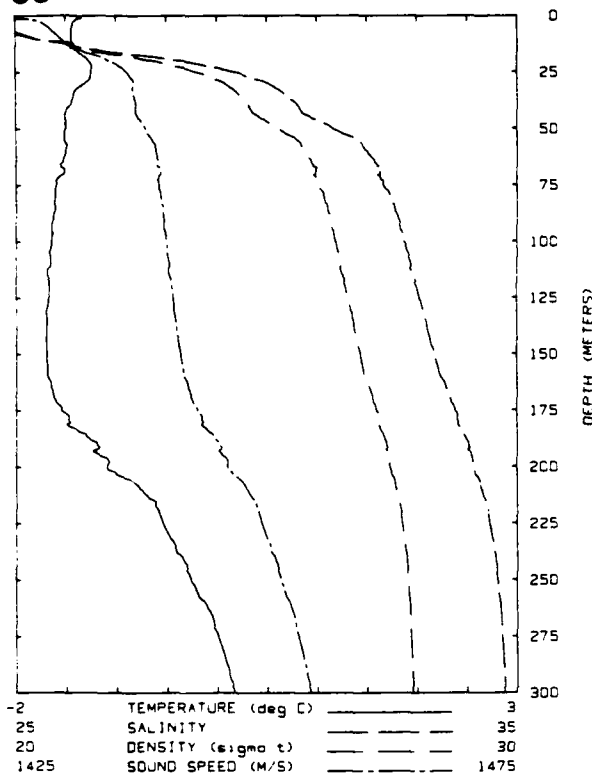


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.43	1432.5	21.92	27.25
10.1	-1.43	1432.9	22.24	27.65
15.1	-1.39	1433.1	22.38	27.81
20.3	-1.22	1435.1	23.03	28.63
25.1	-1.12	1436.5	23.57	29.29
30.1	-1.18	1437.2	24.08	29.92
35.3	-1.28	1437.4	24.34	30.24
40.2	-1.33	1437.5	24.51	30.45
45.0	-1.42	1437.8	24.83	30.86
50.0	-1.37	1438.7	25.23	31.35
55.3	-1.40	1439.2	25.52	31.71
60.2	-1.40	1439.4	25.64	31.86
65.2	-1.44	1439.6	25.80	32.05
70.3	-1.45	1439.8	25.93	32.20
75.3	-1.48	1439.9	25.97	32.26
80.1	-1.49	1440.0	26.03	32.34
85.1	-1.47	1440.3	26.08	32.39
90.1	-1.49	1440.4	26.14	32.46
95.1	-1.49	1440.5	26.18	32.52
100.1	-1.51	1440.6	26.23	32.58
110.1	-1.54	1440.8	26.34	32.72
120.0	-1.53	1441.1	26.44	32.84
130.3	-1.55	1441.4	26.52	32.94
140.3	-1.56	1441.7	26.60	33.04
150.4	-1.57	1441.9	26.70	33.15
160.1	-1.54	1442.4	26.80	33.28
170.5	-1.45	1443.2	26.93	33.45
180.5	-1.31	1444.2	27.09	33.65
190.3	-1.14	1445.4	27.24	33.83
200.2	-.99	1446.6	27.40	34.04
210.1	-.86	1448.0	27.79	34.53
220.7	-.59	1449.1	27.65	34.37
230.1	-.49	1449.9	27.71	34.45
240.2	-.36	1450.9	27.77	34.53
250.4	-.25	1451.6	27.80	34.57
260.4	-.16	1452.3	27.83	34.62
270.5	-.04	1453.0	27.85	34.65
280.1	.06	1453.7	27.87	34.68
290.3	.14	1454.3	27.88	34.70
293.5	.17	1454.4	27.86	34.68

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	Helo	71 39.2	145 52.3

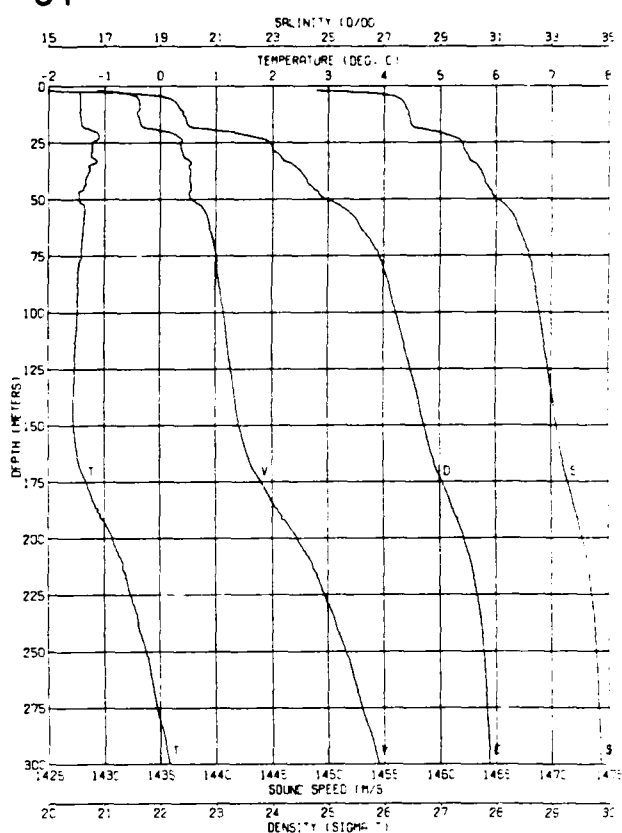
33



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.2	1.2	-1.38	17.828	21.481	17.238	1424.5
2.8	2.8	-1.42	18.852	23.811	19.218	1427.5
8.2	8.1	-1.44	20.475	25.024	20.117	1429.0
14.2	14.2	-1.40	21.438	26.272	21.128	1431.0
20.8	20.7	-1.28	23.158	28.438	22.874	1434.7
27.6	27.4	-1.25	24.080	28.851	23.854	1436.5
34.5	34.3	-1.42	24.440	30.330	24.408	1436.7
41.3	41.0	-1.48	24.833	30.848	24.885	1438.9
48.0	47.7	-1.51	24.882	31.184	25.083	1437.6
54.9	54.8	-1.52	25.424	31.783	25.588	1438.5
61.7	61.3	-1.51	25.827	32.031	25.785	1439.0
68.6	68.2	-1.51	25.800	32.285	25.975	1439.4
75.2	74.8	-1.60	25.774	32.318	26.020	1439.2
82.0	81.5	-1.61	25.881	32.480	26.151	1439.4
88.8	88.2	-1.63	25.861	32.603	26.251	1439.6
95.6	94.9	-1.64	26.006	32.679	26.313	1439.8
102.3	101.7	-1.62	26.033	32.694	26.324	1439.9
109.1	108.7	-1.65	26.084	32.764	26.382	1439.9
115.8	115.4	-1.66	26.117	32.837	26.441	1440.1
122.6	122.1	-1.68	26.129	32.881	26.485	1440.1
129.4	128.8	-1.67	26.223	32.891	26.566	1440.5
136.2	135.1	-1.68	26.286	33.080	26.822	1440.6
143.0	142.4	-1.70	26.327	33.158	26.703	1440.8
149.8	148.9	-1.70	26.359	33.208	26.741	1440.9
156.6	155.3	-1.70	26.425	33.288	26.806	1441.1
163.4	161.7	-1.69	26.480	33.370	26.874	1441.4
170.2	168.6	-1.68	26.548	33.441	26.931	1441.6
177.0	175.3	-1.65	26.678	33.572	27.037	1442.1
183.8	182.3	-1.61	26.789	33.686	27.128	1442.5
190.6	189.3	-1.48	26.884	33.813	27.228	1443.4
197.4	196.3	-1.41	27.102	33.870	27.271	1443.9
204.2	203.5	-1.20	27.381	34.023	27.389	1445.2
211.0	210.5	-1.11	27.533	34.113	27.459	1445.9
217.8	217.2	-1.02	27.637	34.158	27.492	1446.4
224.6	224.0	-0.78	27.824	34.271	27.574	1447.8
231.4	230.8	-0.64	28.121	34.388	27.645	1448.7
238.2	237.6	-0.57	28.224	34.428	27.681	1449.2
245.0	244.4	-0.52	28.304	34.471	27.725	1449.6
251.8	251.2	-0.44	28.408	34.521	27.781	1450.1
258.6	258.0	-0.41	28.482	34.548	27.782	1450.4
265.4	264.8	-0.31	28.578	34.588	27.810	1451.0
272.2	271.6	-0.27	28.622	34.604	27.821	1451.3
279.0	278.4	-0.21	28.688	34.631	27.839	1451.7
285.8	285.2	-0.11	28.814	34.671	27.869	1452.3
292.6	292.0	-0.05	28.878	34.681	27.872	1452.7
299.4	298.8	-0.03	28.907	34.682	27.878	1452.8
306.2	305.6	0.02	28.884	34.711	27.882	1453.2
313.0	312.4	0.06	28.908	34.724	27.901	1453.5
319.8	319.2	0.08	28.948	34.734	27.907	1453.7
326.6	326.0	0.12	28.981	34.743	27.913	1454.0
333.4	332.8	0.15	29.120	34.752	27.918	1454.2
340.2	339.6	0.19	29.180	34.763	27.925	1454.5
347.0	346.4	0.21	29.189	34.771	27.931	1454.7

34

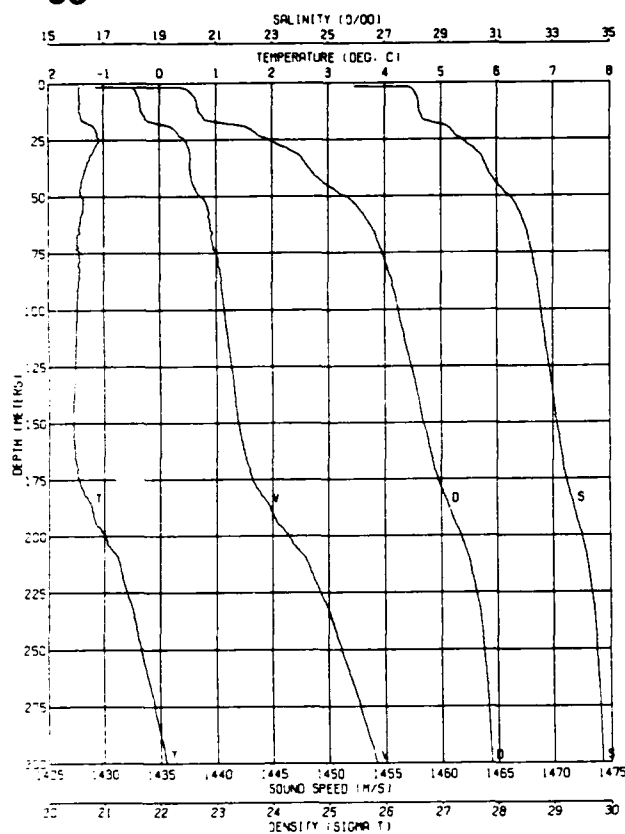


DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
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5.4	-1.44	1433.1	22.11
10.1	-1.44	1433.3	22.32
15.1	-1.42	1433.2	22.46
20.3	-1.16	1435.6	23.24
25.1	-1.22	1436.8	23.95
30.2	-1.24	1437.0	24.12
35.0	-1.23	1437.7	24.37
40.2	-1.32	1437.7	24.60
45.0	-1.38	1437.8	24.73
50.2	-1.46	1437.9	24.98
55.1	-1.37	1439.0	25.35
60.3	-1.38	1439.3	25.54
65.2	-1.39	1439.6	25.68
70.2	-1.41	1439.9	25.81
75.1	-1.42	1440.1	25.91
80.2	-1.47	1440.1	26.00
85.1	-1.48	1440.2	26.06
90.4	-1.47	1440.4	26.13
95.3	-1.48	1440.5	26.17
100.5	-1.49	1440.7	26.23
110.3	-1.51	1440.9	26.33
120.1	-1.53	1441.1	26.43
130.1	-1.54	1441.4	26.53
140.3	-1.56	1441.7	26.63
150.3	-1.53	1441.9	26.72
160.4	-1.51	1442.6	26.82
170.2	-1.42	1443.4	26.96
180.2	-1.25	1444.6	27.13
190.3	-1.07	1445.8	27.28
200.4	-0.85	1447.3	27.44
210.4	-0.67	1448.5	27.56
220.2	-0.58	1449.3	27.64
230.1	-0.46	1450.1	27.71
240.2	-0.38	1450.8	27.76
250.1	-0.25	1451.6	27.79
260.3	-0.17	1452.2	27.81
270.2	-0.09	1452.8	27.84
280.1	-0.01	1453.3	27.85
290.2	-0.09	1454.0	27.87
299.8	.16	1454.5	27.87

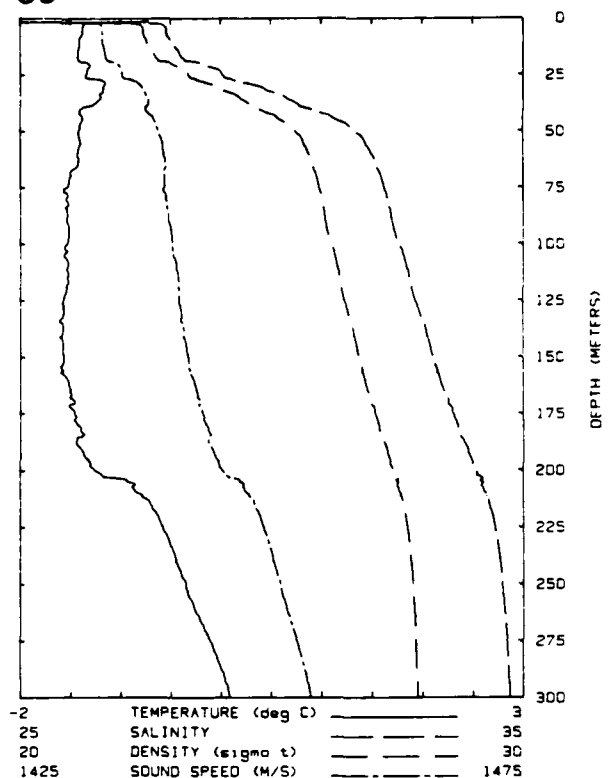
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
35		X	237	2253	Helo	71 54.2	145 52.0
36	X		238	0425	Ship	71 8.1	146 29.8

35



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	-1.45	1433.0	22.59	28.08
10.3	-1.44	1433.3	22.68	28.19
15.1	-1.40	1433.7	22.79	28.32
20.4	-1.13	1436.4	23.63	29.37
25.5	-1.09	1437.4	23.99	29.82
30.3	-1.19	1437.7	24.38	30.30
35.3	-1.30	1437.7	24.59	30.56
40.2	-1.36	1437.8	24.75	30.75
45.3	-1.41	1438.1	24.99	31.05
50.3	-1.39	1438.8	25.33	31.47
55.3	-1.38	1439.3	25.54	31.73
60.5	-1.42	1439.4	25.69	31.91
65.2	-1.46	1439.5	25.80	32.05
70.0	-1.49	1439.6	25.88	32.14
75.4	-1.45	1440.0	25.96	32.25
80.5	-1.47	1440.1	26.03	32.33
85.4	-1.45	1440.4	26.09	32.41
90.4	-1.46	1440.5	26.14	32.47
95.3	-1.48	1440.6	26.20	32.54
100.2	-1.48	1440.7	26.23	32.58
110.3	-1.50	1440.9	26.33	32.70
120.4	-1.52	1441.2	26.42	32.81
130.0	-1.54	1441.4	26.51	32.92
140.1	-1.56	1441.6	26.60	33.03
150.4	-1.57	1441.9	26.68	33.13
160.0	-1.55	1442.3	26.78	33.25
170.2	-1.48	1443.0	26.88	33.39
180.4	-1.37	1443.8	27.03	33.57
190.4	-1.19	1445.1	27.19	33.78
200.3	-0.99	1446.5	27.36	33.99
210.3	-0.75	1448.0	27.50	34.18
220.5	-0.65	1448.9	27.59	34.29
230.3	-0.51	1449.8	27.67	34.40
240.1	-0.43	1450.5	27.72	34.47
250.1	-0.33	1451.2	27.76	34.52
260.3	-0.24	1451.8	27.79	34.57
270.3	-0.14	1452.5	27.82	34.61
280.0	-0.07	1453.0	27.84	34.63
290.3	0.03	1453.7	27.86	34.67
300.1	0.10	1454.2	27.87	34.69
302.3	0.12	1454.3	27.87	34.69

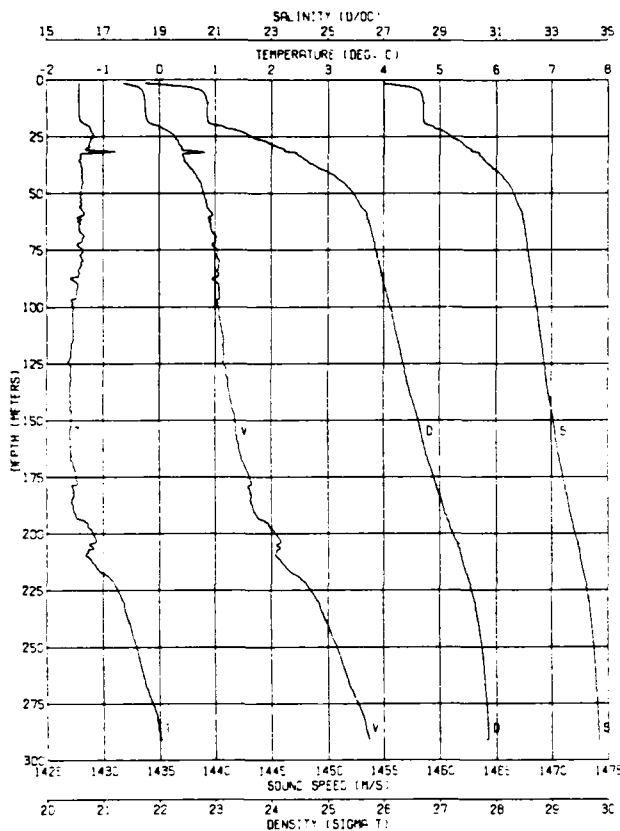
36



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	-0.73	12.852	14.883	11.820	1418.7
5.0	5.0	-1.38	22.664	27.905	22.445	1433.1
13.5	13.4	-1.42	22.805	28.122	22.822	1433.4
21.8	21.8	-1.31	23.395	28.813	23.178	1435.0
30.5	30.3	-1.17	24.212	29.773	23.952	1437.1
39.8	39.8	-1.38	24.718	30.664	24.878	1437.4
49.3	49.1	-1.41	25.393	31.809	25.441	1438.7
58.3	58.0	-1.42	25.830	31.942	25.711	1439.2
67.7	67.3	-1.48	25.719	32.128	25.861	1439.3
77.1	76.6	-1.57	25.754	32.260	25.872	1439.3
86.6	86.0	-1.53	25.870	32.377	26.065	1439.7
95.7	95.0	-1.52	25.945	32.457	26.130	1440.1
105.2	104.5	-1.56	26.033	32.618	26.261	1440.2
114.7	114.0	-1.52	26.148	32.729	26.350	1440.7
123.7	122.8	-1.56	26.197	32.829	26.432	1440.8
133.2	132.3	-1.58	26.268	32.972	26.549	1441.1
142.7	141.7	-1.59	26.385	33.115	26.685	1441.4
151.8	150.7	-1.57	26.486	33.222	26.750	1441.8
161.3	160.1	-1.53	26.619	33.380	26.881	1442.3
171.1	169.8	-1.46	26.788	33.521	26.990	1443.0
180.5	179.1	-1.44	26.926	33.682	27.120	1443.5
189.7	188.3	-1.44	27.080	33.849	27.255	1443.8
199.6	198.1	-1.31	27.287	34.014	27.385	1444.8
209.4	207.8	-0.88	27.804	34.218	27.535	1447.3
218.9	217.2	-0.68	28.078	34.355	27.638	1448.6
228.7	226.9	-0.57	28.258	34.480	27.718	1449.4
238.0	236.1	-0.47	28.393	34.524	27.766	1450.1
247.5	245.5	-0.39	28.489	34.565	27.795	1450.6
257.2	255.0	-0.32	28.582	34.602	27.821	1451.2
266.8	264.3	-0.22	28.705	34.643	27.850	1451.9
275.5	273.2	-0.13	28.811	34.676	27.872	1452.5
284.7	282.2	-0.04	28.910	34.808	27.888	1453.1
293.7	291.2	0.04	28.996	34.720	27.898	1453.6
303.0	300.4	0.10	29.083	34.738	27.910	1454.0
317.1	314.3	0.20	29.172	34.763	27.925	1454.7
333.4	330.4	0.28	29.252	34.783	27.937	1455.3
349.7	346.6	0.31	29.313	34.798	27.947	1455.8
366.1	362.8	0.34	29.354	34.812	27.956	1456.2
382.8	379.0	0.36	29.382	34.825	27.965	1456.6
399.4	395.8	0.39	29.435	34.841	27.977	1457.0
416.2	412.2	0.42	29.479	34.858	27.987	1457.5
433.4	429.3	0.43	29.502	34.863	27.992	1457.8
450.6	446.3	0.44	29.524	34.870	27.997	1458.1
467.4	462.9	0.45	29.542	34.874	28.000	1458.5
484.4	479.7	0.45	29.557	34.878	28.003	1458.8
501.2	496.3	0.48	29.571	34.882	28.006	1459.1
517.8	512.7	0.48	29.581	34.885	28.009	1459.3
534.8	528.5	0.48	29.592	34.889	28.011	1459.6
551.8	546.3	0.48	29.599	34.892	28.014	1459.9

Station Number 37 38 ASL Cast X APL Cast X Julian Day 240 240 GMT hhmm 0014 0509 Platform Helo Ship Latitude 71 22.4 71 15.5 Longitude 148 11.0 149 6.7

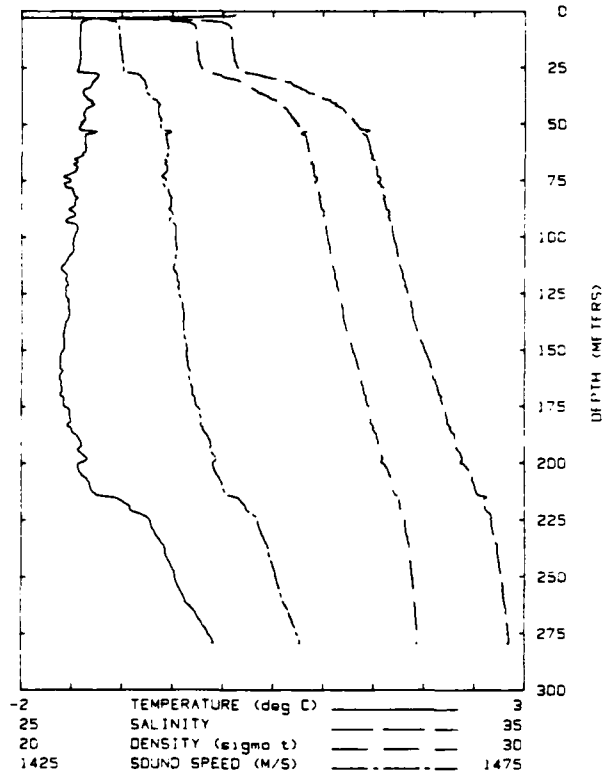
37



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.43	1433.5	22.78	28.31
10.1	-1.43	1433.7	22.87	28.43
15.0	-1.43	1433.7	22.86	28.41
20.4	-1.29	1434.9	23.14	28.77
25.1	-1.18	1436.4	23.66	29.41
30.3	-1.29	1437.0	24.20	30.08
35.0	-1.39	1437.3	24.59	30.56
40.3	-1.38	1438.1	24.99	31.04
45.0	-1.36	1438.7	25.26	31.39
50.3	-1.39	1439.0	25.46	31.63
56.0	-1.38	1439.3	25.59	31.79
60.1	-1.37	1439.7	25.70	31.92
65.1	-1.43	1439.6	25.78	32.08
70.0	-1.37	1440.1	25.82	32.08
75.0	-1.35	1440.2	25.87	32.13
80.1	-1.37	1440.4	25.92	32.19
85.4	-1.42	1440.3	25.97	32.26
90.1	-1.45	1440.3	26.00	32.30
95.2	-1.48	1440.4	26.07	32.38
100.2	-1.53	1440.3	26.12	32.44
110.2	-1.54	1440.6	26.21	32.55
120.3	-1.58	1440.7	26.31	32.67
130.0	-1.59	1441.0	26.40	32.78
140.1	-1.59	1441.3	26.50	32.92
150.2	-1.57	1441.8	26.62	33.06
160.1	-1.58	1442.0	26.71	33.17
170.5	-1.53	1442.7	26.83	33.33
180.3	-1.53	1443.0	26.96	33.48
190.0	-1.53	1443.4	27.08	33.63
200.3	-1.18	1445.4	27.24	33.84
210.1	-1.30	1445.4	27.39	34.02
220.5	-1.87	1447.7	27.54	34.22
230.2	-1.64	1449.1	27.65	34.37
240.1	-1.53	1450.0	27.71	34.45
250.1	-1.42	1450.8	27.75	34.51
260.1	-1.32	1451.5	27.79	34.56
270.3	-1.20	1452.2	27.82	34.60
280.0	-1.05	1453.1	27.85	34.65
290.3	.01	1453.6	27.86	34.67
291.4	.03	1453.7	27.85	34.65

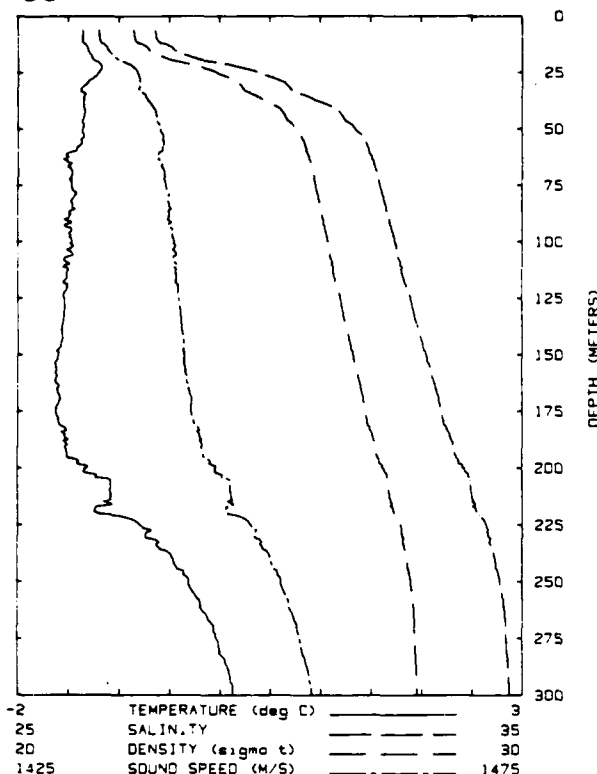
38



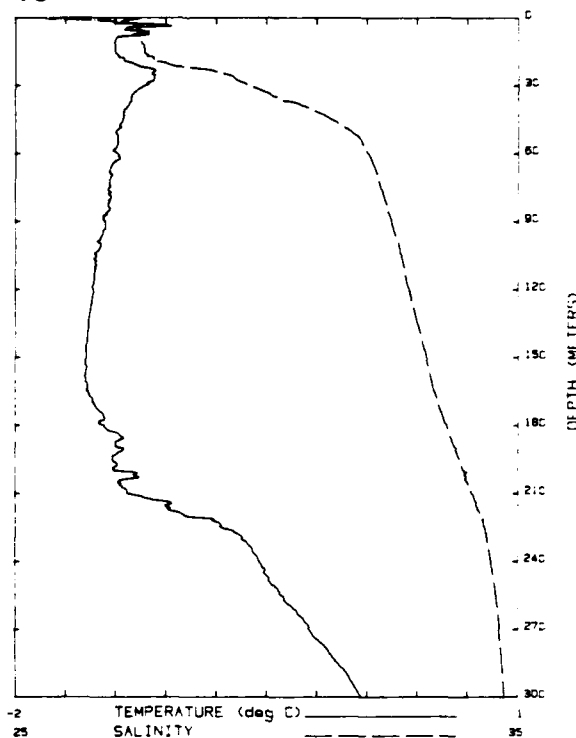
DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	0.13	2.746	2.748	1406.7
5.9	1.8	-1.41	23.506	29.068	1434.6
12.0	11.9	-1.42	23.578	29.171	1434.8
18.4	18.3	-1.41	23.608	29.202	1434.9
24.8	24.7	-1.43	23.655	29.280	1435.1
31.5	31.3	-1.28	24.503	30.277	1437.2
38.1	37.9	-1.37	24.813	30.918	1437.8
44.6	44.3	-1.37	25.284	31.422	1438.6
51.3	51.0	-1.42	25.452	31.702	1439.6
58.0	57.6	-1.37	25.628	31.884	1439.4
64.8	64.3	-1.39	25.675	31.966	1439.5
71.3	70.9	-1.45	25.712	32.076	1439.5
78.0	77.5	-1.56	25.686	32.152	1439.2
84.7	84.2	-1.47	25.808	32.218	1439.8
91.4	90.8	-1.46	25.884	32.313	1440.1
98.1	97.5	-1.44	25.946	32.377	1440.4
104.8	104.1	-1.48	25.974	32.453	1440.4
111.5	110.7	-1.55	25.972	32.517	1440.3
118.2	117.4	-1.55	26.021	32.577	1440.5
124.9	124.0	-1.56	26.085	32.674	1440.6
131.6	130.7	-1.53	26.183	32.747	1441.0
138.2	137.3	-1.55	26.190	32.805	1441.1
145.0	144.0	-1.59	26.237	32.903	1441.1
151.7	150.6	-1.59	26.322	33.020	1441.4
158.4	157.2	-1.62	26.383	33.135	1441.5
165.1	163.9	-1.60	26.481	33.245	1441.8
171.8	170.5	-1.60	26.578	33.369	1442.1
178.6	177.2	-1.52	26.693	33.434	1442.7
185.2	183.8	-1.54	26.749	33.529	1442.9
191.9	190.5	-1.41	26.849	33.657	1443.8
198.6	197.1	-1.37	27.058	33.753	1444.2
205.3	203.7	-1.42	27.124	33.807	1444.2
212.1	210.5	-1.31	27.287	34.017	1445.0
218.9	217.2	-0.98	27.701	34.189	1446.9
225.8	224.0	-0.74	28.011	34.333	1448.3
232.6	230.7	-0.87	28.101	34.369	1448.8
239.3	237.4	-0.57	28.248	34.451	1449.5
246.0	244.0	-0.52	28.328	34.484	1449.9
252.7	250.6	-0.47	28.404	34.538	1450.3
259.4	257.3	-0.40	28.504	34.589	1450.8
266.2	264.0	-0.30	28.627	34.634	1451.4
272.7	270.4	-0.21	28.726	34.655	1452.0
279.4	277.0	-0.11	28.840	34.692	1452.6
281.7	279.3	-0.10	28.834	34.674	1452.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
39	X		240	1001	Ship	71 18.6	149 56.1
40	X		240	1803	Ship	71 42.9	150 2.4

39



40



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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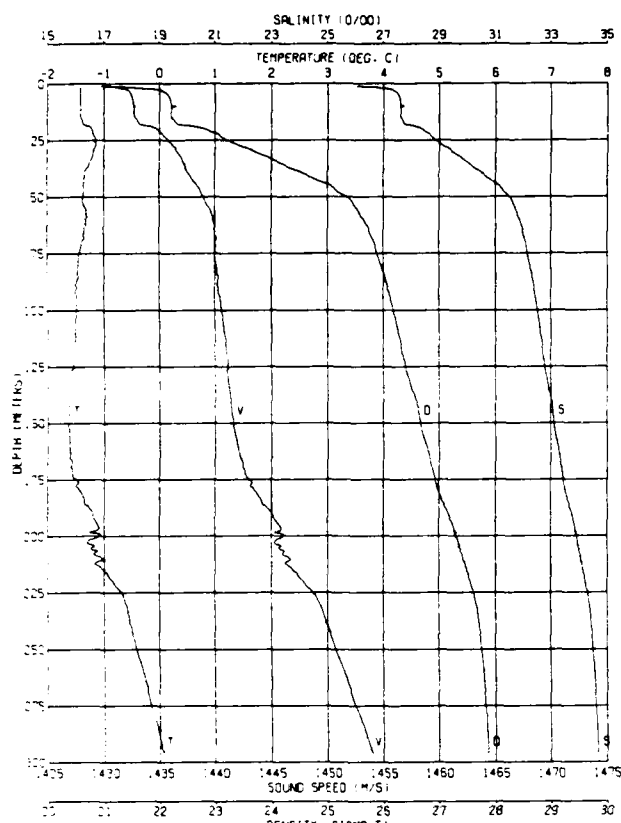
5.6	5.6	-1.35	22.532	27.689	22.279	1437.0
17.7	17.6	-1.27	23.085	28.373	22.822	1434.5
29.6	29.4	-1.32	24.494	30.301	24.381	1437.1
41.3	41.0	-1.34	25.225	31.316	25.202	1438.5
53.2	52.9	-1.35	25.594	31.819	25.810	1439.3
65.1	64.7	-1.51	25.647	32.061	25.809	1439.1
77.1	76.6	-1.46	25.789	32.202	25.922	1439.7
89.1	88.5	-1.49	25.875	32.338	26.033	1439.9
101.0	100.4	-1.47	26.003	32.478	26.146	1440.4
113.0	112.2	-1.50	26.080	32.608	26.252	1440.7
125.0	124.1	-1.55	26.185	32.774	26.388	1440.8
136.9	136.0	-1.55	26.259	32.903	26.492	1441.2
148.9	147.6	-1.61	26.321	33.041	26.605	1441.3
160.8	159.6	-1.61	26.453	33.214	26.746	1441.7
172.9	171.6	-1.60	26.571	33.359	26.863	1442.1
184.9	183.5	-1.51	26.758	33.518	26.989	1442.9
197.0	195.5	-1.49	26.912	33.699	27.135	1443.5
209.4	207.8	-1.08	27.457	33.973	27.344	1446.0
222.0	220.2	-1.19	27.493	34.141	27.484	1446.9
234.6	232.7	-0.60	28.149	34.349	27.630	1449.2
246.6	244.8	-0.40	28.444	34.513	27.754	1450.5
258.8	256.8	-0.24	28.650	34.599	27.815	1451.6
271.1	268.8	-0.07	28.850	34.688	27.862	1452.6
282.5	280.1	-0.00	28.836	34.695	27.881	1453.2
294.4	291.8	0.10	28.080	34.735	27.907	1453.9
306.9	304.2	0.14	28.113	34.750	27.918	1454.3
319.6	328.8	0.22	28.218	34.784	27.940	1455.1
334.3	351.1	0.28	28.291	34.806	27.955	1455.8
349.0	374.5	0.32	28.383	34.825	27.967	1456.4
401.6	398.0	0.35	28.587	34.830	27.970	1456.9
425.7	421.7	0.38	28.436	34.843	27.979	1457.4
450.5	446.2	0.40	28.474	34.853	27.988	1457.9
474.0	469.4	0.41	28.504	34.861	27.992	1458.4
497.9	492.9	0.44	28.545	34.873	27.999	1458.9
522.1	516.9	0.45	28.586	34.877	28.003	1459.3
546.3	540.8	0.45	28.583	34.883	28.007	1459.7
571.1	565.3	0.45	28.589	34.888	28.011	1460.2
595.8	589.4	0.46	28.619	34.892	28.014	1460.6
619.5	613.1	0.44	28.622	34.897	28.019	1460.9
643.2	636.5	0.42	28.611	34.900	28.022	1461.2
666.2	659.2	0.39	28.603	34.901	28.025	1461.5
690.0	682.7	0.35	28.585	34.907	28.031	1461.7
711.7	704.0	0.35	28.587	34.907	28.032	1462.0

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.4	1.4	-1.27	21.044	25.636	20.612	1430.6
6.1	6.1	-1.34	22.388	27.466	22.090	1432.8
13.1	13.0	-1.40	22.386	27.559	22.166	1432.7
20.4	20.3	-1.34	22.802	27.777	22.342	1433.4
27.7	27.5	-1.17	23.889	28.352	23.612	1436.5
34.8	34.6	-1.28	24.334	30.055	24.182	1436.9
41.8	41.6	-1.35	24.834	30.822	24.884	1438.0
48.0	48.8	-1.38	25.341	31.504	25.356	1438.7
56.2	55.9	-1.38	25.828	31.803	25.678	1439.3
63.5	63.1	-1.38	25.786	32.078	25.818	1439.7
70.7	70.3	-1.43	25.817	32.187	25.817	1439.8
78.0	77.5	-1.44	25.885	32.305	26.005	1439.9
85.2	84.7	-1.44	25.883	32.407	26.087	1440.2
92.4	91.8	-1.46	26.015	32.493	26.158	1440.3
99.7	99.0	-1.49	26.074	32.600	26.245	1440.5
106.9	106.2	-1.52	26.109	32.676	26.308	1440.5
114.2	113.4	-1.52	26.185	32.753	26.370	1440.7
121.4	120.6	-1.54	26.219	32.838	26.439	1440.9
128.7	127.8	-1.55	26.268	32.911	26.499	1441.1
135.9	134.9	-1.56	26.316	32.992	26.565	1441.2
143.2	142.2	-1.57	26.375	33.078	26.634	1441.4
150.4	149.3	-1.58	26.437	33.166	26.706	1441.6
157.6	156.5	-1.57	26.496	33.239	26.765	1441.9
164.9	163.7	-1.56	26.560	33.313	26.825	1442.1
172.2	171.0	-1.54	26.654	33.406	26.901	1442.5
179.7	178.3	-1.47	26.803	33.527	26.995	1443.1
187.0	185.6	-1.37	26.971	33.650	27.092	1443.8
194.5	193.1	-1.38	27.071	33.793	27.208	1444.1
202.1	200.6	-1.41	27.143	33.923	27.314	1444.3
209.9	208.3	-1.36	27.274	34.037	27.405	1444.8
217.7	216.0	-1.06	27.593	34.157	27.493	1446.4
225.5	223.7	-0.79	27.984	34.318	27.613	1448.1
232.9	231.1	-0.64	28.140	34.390	27.665	1449.0
240.3	238.4	-0.56	28.286	34.455	27.713	1449.6
247.8	245.9	-0.52	28.343	34.509	27.755	1450.0
255.5	253.3	-0.43	28.450	34.549	27.784	1450.6
263.1	260.9	-0.35	28.559	34.598	27.819	1451.1
270.6	268.8	-0.26	28.682	34.629	27.840	1451.7
278.1	275.8	-0.19	28.745	34.654	27.857	1452.2
285.9	283.4	-0.10	28.848	34.686	27.878	1452.8
292.8	290.3	-0.02	28.938	34.710	27.893	1453.3
299.3	296.7	0.03	28.996	34.725	27.903	1453.6
306.1	303.4	0.08	29.052	34.738	27.911	1454.0
315.0	312.3	0.18	29.157	34.765	27.927	1454.6
327.7	324.8	0.25	29.241	34.788	27.942	1455.2
341.6	338.6	0.34	29.347	34.812	27.958	1455.9
355.7	352.5	0.37	29.387	34.831	27.962	1456.2
369.7	366.4	0.38	29.416	34.833	27.970	1456.6
382.5	378.8	0.39	29.432	34.842	27.977	1456.8

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
41		X	240	1816	Helo	71 42.9	149 16.5
42	X		241	0144	Ship	71 57.9	149 58.5

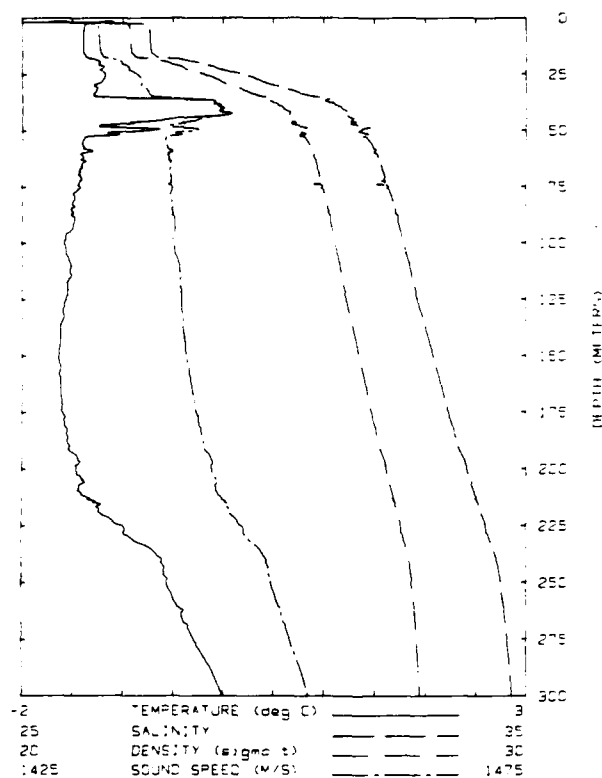
41



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	-1.41	1432.5	22.16	27.55
10.1	-1.41	1432.7	22.22	27.61
15.3	-1.39	1432.8	22.23	27.64
20.3	-1.20	1434.8	22.85	28.40
25.1	-1.16	1435.8	23.24	28.89
30.3	-1.18	1436.6	23.73	29.49
35.1	-1.25	1437.2	24.15	30.02
40.5	-1.32	1437.8	24.64	30.62
45.0	-1.35	1438.4	25.05	31.13
50.3	-1.36	1439.0	25.38	31.53
55.2	-1.31	1439.5	25.52	31.71
60.1	-1.31	1439.8	25.65	31.87
65.2	-1.33	1440.0	25.75	31.99
70.3	-1.39	1440.0	25.85	32.11
75.1	-1.43	1440.0	25.89	32.16
80.1	-1.45	1440.1	25.96	32.25
85.0	-1.44	1440.3	26.02	32.32
90.3	-1.46	1440.4	26.07	32.39
95.2	-1.48	1440.5	26.13	32.46
100.1	-1.49	1440.6	26.18	32.52
110.2	-1.50	1440.8	26.27	32.62
120.1	-1.52	1441.1	26.36	32.74
130.0	-1.59	1441.1	26.45	32.86
140.2	-1.61	1441.4	26.59	33.03
150.3	-1.63	1441.6	26.67	33.12
160.0	-1.61	1442.0	26.78	33.25
170.4	-1.56	1442.6	26.88	33.38
180.0	-1.41	1443.6	26.99	33.52
190.0	-1.20	1445.0	27.16	33.74
200.2	-1.10	1446.0	27.30	33.92
210.4	-1.01	1446.6	27.42	34.06
220.1	-0.85	1447.8	27.55	34.24
230.2	-0.61	1449.3	27.65	34.37
240.2	-0.51	1450.1	27.70	34.45
250.2	-0.42	1450.7	27.75	34.51
260.3	-0.30	1451.5	27.79	34.56
270.3	-0.21	1452.2	27.81	34.59
280.1	-0.09	1452.9	27.84	34.64
290.3	.01	1453.6	27.86	34.66
296.2	.08	1454.0	27.86	34.68

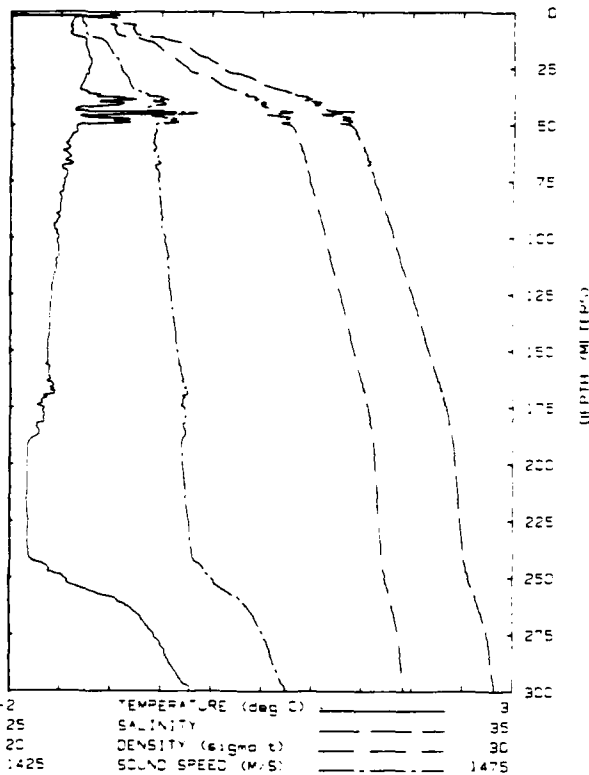
42



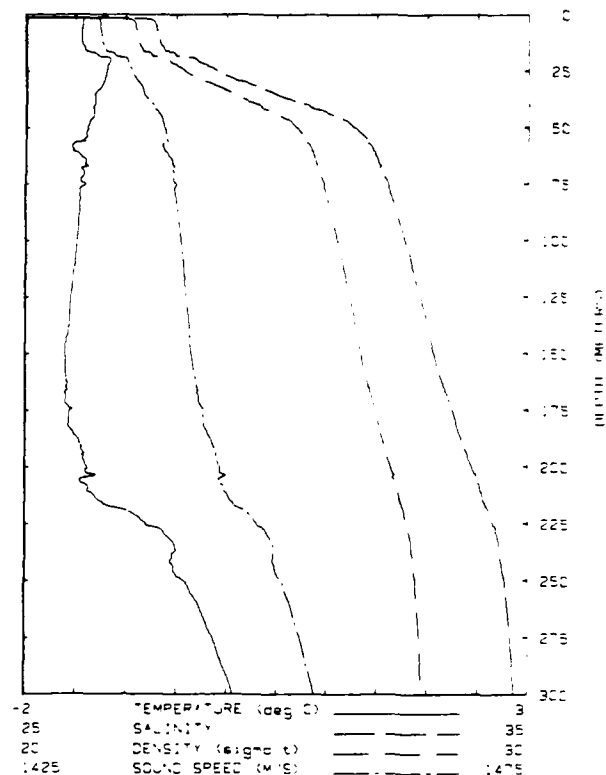
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	-1.18	20.311	24.587	19.764	1429.8
1.6	1.6	-1.21	20.183	24.455	19.859	1429.3
1.8	1.8	-1.18	20.022	24.205	19.456	1429.1
1.7	1.7	-1.18	20.281	24.572	19.752	1429.5
1.7	1.7	-1.18	19.728	23.808	19.136	1428.6
1.7	1.7	-1.10	19.217	23.085	18.552	1427.9
5.2	5.1	-1.39	22.379	27.528	22.139	1432.6
11.4	11.3	-1.39	22.389	27.542	22.152	1432.7
18.4	18.3	-1.29	22.890	28.116	22.615	1434.1
25.3	25.2	-1.17	23.821	29.388	23.639	1436.4
32.3	32.1	-1.26	24.571	30.350	24.420	1437.4
38.8	38.6	-0.01	26.177	31.213	25.077	1444.6
44.5	44.2	-0.40	26.102	31.506	25.328	1443.3
51.4	51.1	-1.15	25.731	31.797	25.587	1444.2
58.4	58.0	-1.38	25.680	31.982	25.743	1439.4
65.4	65.0	-1.41	25.783	32.133	25.865	1439.7
72.4	71.9	-1.40	25.839	32.197	25.917	1439.9
78.4	78.9	-1.47	25.884	32.335	26.030	1439.9
86.4	85.9	-1.50	25.933	32.428	26.107	1440.0
93.4	92.8	-1.49	25.989	32.492	26.158	1440.2
100.4	99.8	-1.58	25.984	32.577	26.228	1440.0
107.4	106.7	-1.53	26.086	32.859	26.394	1440.5
114.5	113.7	-1.51	26.157	32.731	26.352	1440.8
121.5	120.6	-1.54	26.192	32.808	26.415	1440.8
128.5	127.8	-1.58	26.221	32.884	26.477	1440.9
135.4	134.5	-1.60	26.272	32.973	26.550	1441.0
142.5	141.5	-1.62	26.318	33.055	26.617	1441.1
149.5	148.4	-1.63	26.376	33.146	26.691	1441.3
156.5	155.4	-1.62	26.453	33.228	26.757	1441.6
163.6	162.4	-1.62	26.514	33.313	26.826	1441.8
170.6	169.4	-1.61	26.593	33.401	26.897	1442.1
177.7	176.4	-1.57	26.687	33.495	26.964	1442.5
184.8	183.4	-1.55	26.767	33.574	27.036	1442.8
192.0	190.5	-1.53	26.846	33.650	27.098	1443.2
199.2	197.8	-1.44	27.034	33.804	27.219	1443.9
206.4	204.8	-1.41	27.141	33.812	27.306	1444.3
213.7	212.0	-1.38	27.252	34.011	27.384	1444.8
220.9	219.2	-1.23	27.430	34.098	27.452	1445.7
228.4	226.6	-0.89	27.726	34.210	27.532	1447.1
235.0	234.1	-0.75	28.008	34.331	27.622	1448.5
242.5	241.5	-0.61	28.210	34.437	27.701	1449.4
250.5	248.5	-0.55	28.296	34.478	27.732	1449.9
257.4	255.3	-0.50	28.388	34.525	27.767	1450.2
264.5	262.3	-0.38	28.498	34.559	27.780	1450.9
271.6	269.3	-0.35	28.582	34.587	27.819	1451.3
278.9	276.5	-0.26	28.686	34.633	27.843	1451.8
285.6	283.2	-0.17	28.767	34.664	27.884	1452.4
292.2	289.7	-0.10	28.852	34.684	27.877	1452.9
298.8	296.0	-0.03	28.920	34.702	27.888	1453.3

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
43	X		241	0548	Ship	72 9.8	150 1.7
44	X		241	1101	Ship	72 24.9	150 39.9

43



44

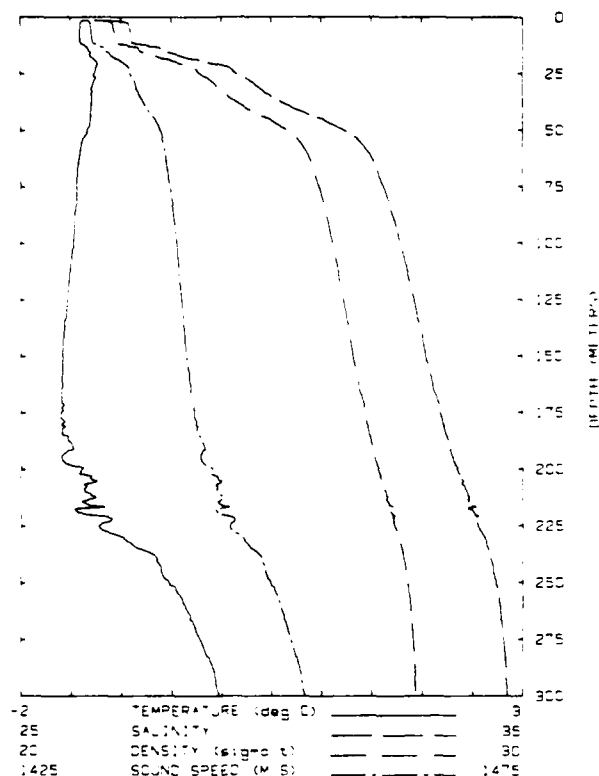


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	-0.89	18.153	21.820	17.370	1426.5
4.2	4.2	-1.38	22.112	27.157	21.841	1432.1
10.9	10.9	-1.38	22.484	27.838	22.230	1433.0
17.1	17.0	-1.23	23.288	28.594	23.001	1435.0
23.5	23.4	-1.20	23.888	29.101	23.410	1435.9
29.9	29.8	-1.26	24.181	29.822	23.983	1436.7
36.3	36.1	-1.24	24.782	30.583	24.808	1437.9
42.7	42.5	-1.28	25.183	31.200	25.107	1438.6
49.1	48.9	-0.84	25.875	31.803	25.583	1441.8
55.5	55.2	-1.40	25.828	31.916	25.889	1439.3
61.9	61.5	-1.48	25.868	32.026	25.780	1439.2
68.0	67.6	-1.37	25.835	32.167	25.892	1438.8
74.2	73.7	-1.44	25.845	32.243	25.855	1439.8
80.3	79.8	-1.46	25.895	32.335	26.030	1439.9
86.4	85.8	-1.50	25.930	32.420	26.099	1440.0
92.5	91.9	-1.51	25.989	32.510	26.173	1440.1
98.6	98.0	-1.53	26.040	32.603	26.249	1440.2
104.7	104.0	-1.52	26.111	32.677	26.308	1440.5
110.8	110.1	-1.54	26.161	32.766	26.381	1440.6
116.8	116.0	-1.55	26.217	32.855	26.453	1440.8
122.8	122.0	-1.59	26.279	32.967	26.544	1440.9
128.8	127.8	-1.59	26.328	33.040	26.604	1441.1
134.7	133.8	-1.80	26.376	33.121	26.670	1441.2
140.6	139.6	-1.81	26.434	33.200	26.734	1441.4
146.5	145.5	-1.82	26.481	33.274	26.794	1441.5
152.5	151.4	-1.82	26.548	33.363	26.866	1441.7
158.3	157.2	-1.80	26.623	33.439	26.927	1442.0
164.2	163.0	-1.80	26.679	33.514	26.988	1442.2
170.2	168.9	-1.55	26.780	33.614	27.088	1442.7
176.0	174.7	-1.69	26.735	33.694	27.137	1442.2
182.0	180.8	-1.65	26.814	33.754	27.184	1442.8
188.4	187.0	-1.70	26.810	33.802	27.224	1442.5
194.9	193.4	-1.82	26.748	33.842	27.280	1442.1
201.5	200.0	-1.82	26.771	33.869	27.282	1442.2
208.0	206.4	-1.82	26.782	33.896	27.304	1442.4
214.6	212.8	-1.82	26.810	33.921	27.324	1442.5
221.1	218.3	-1.82	26.828	33.939	27.338	1442.8
227.7	225.8	-1.80	26.863	33.965	27.358	1442.9
234.3	232.5	-1.82	26.877	33.993	27.382	1442.8
241.2	239.3	-1.81	26.908	34.019	27.403	1443.1
248.3	246.3	-1.58	27.124	34.072	27.440	1444.3
255.5	253.4	-1.58	27.388	34.164	27.524	1445.7
262.8	260.4	-0.91	27.687	34.283	27.587	1448.1
270.2	267.9	-0.88	28.132	34.405	27.678	1448.4
277.6	275.2	-0.58	28.308	34.481	27.743	1450.3
284.7	282.3	-0.48	28.435	34.545	27.782	1450.9
291.8	289.4	-0.37	28.549	34.583	27.818	1451.5
299.0	296.4	-0.27	28.671	34.635	27.846	1452.1
311.0	308.3	-0.09	28.664	34.683	27.876	1453.2

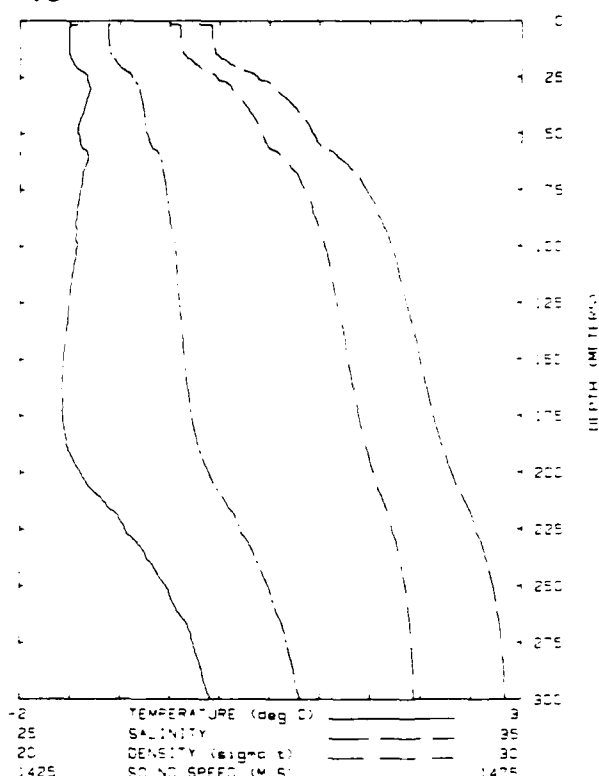
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	-1.24	18.726	23.488	18.860	1427.8
5.3	5.3	-1.43	22.401	27.593	22.194	1432.5
11.8	11.8	-1.44	22.456	27.870	22.256	1432.7
18.2	18.1	-1.28	22.817	28.008	22.528	1434.0
24.5	24.4	-1.19	23.449	28.787	23.139	1435.5
30.9	30.7	-1.23	23.846	29.473	23.710	1436.4
37.1	36.9	-1.31	24.410	30.178	24.282	1437.0
43.4	43.2	-1.32	25.005	30.880	24.838	1438.2
49.8	49.5	-1.38	25.350	31.518	25.367	1438.7
56.2	55.9	-1.41	25.580	31.887	25.850	1439.1
62.6	62.2	-1.48	25.830	31.978	25.739	1439.2
69.0	68.6	-1.44	25.745	32.110	25.848	1439.6
75.5	75.0	-1.41	25.688	32.244	25.955	1440.0
81.9	81.4	-1.44	25.800	32.323	26.020	1440.0
88.3	87.7	-1.45	25.853	32.402	26.084	1440.2
94.8	94.2	-1.47	26.001	32.482	26.149	1440.3
101.2	100.6	-1.48	26.055	32.570	26.221	1440.5
107.5	106.8	-1.50	26.113	32.663	26.297	1440.6
113.9	113.1	-1.52	26.152	32.729	26.350	1440.7
120.2	119.4	-1.53	26.208	32.816	26.421	1440.9
126.6	125.7	-1.54	26.259	32.896	26.486	1441.0
132.9	131.9	-1.56	26.298	32.962	26.540	1441.2
139.1	138.1	-1.57	26.329	33.012	26.581	1441.3
145.3	144.2	-1.58	26.365	33.084	26.640	1441.4
151.3	150.3	-1.80	26.408	33.153	26.696	1441.5
157.5	156.4	-1.80	26.457	33.212	26.743	1441.7
163.8	162.4	-1.58	26.535	33.304	26.817	1442.0
170.3	169.0	-1.59	26.612	33.413	26.908	1442.2
177.5	176.2	-1.58	26.716	33.521	26.993	1442.6
184.7	183.3	-1.54	26.804	33.614	27.068	1442.9
192.0	190.6	-1.45	26.871	33.732	27.161	1443.7
199.4	197.8	-1.40	27.008	33.882	27.285	1444.2
206.7	205.1	-1.41	27.179	33.966	27.349	1444.4
214.1	212.4	-1.32	27.351	34.093	27.449	1445.1
221.5	219.8	-0.85	27.769	34.243	27.559	1447.2
229.1	227.3	-0.66	28.114	34.371	27.650	1448.9
236.9	235.0	-0.51	28.281	34.437	27.697	1449.8
244.5	242.5	-0.54	28.311	34.495	27.748	1449.8
251.3	249.3	-0.45	28.425	34.538	27.776	1450.4
258.3	256.2	-0.33	28.583	34.585	27.809	1451.1
265.7	263.4	-0.25	28.656	34.612	27.826	1451.7
273.0	270.7	-0.18	28.741	34.647	27.851	1452.1
280.5	278.1	-0.10	28.829	34.689	27.865	1452.6
288.0	285.5	-0.05	28.889	34.695	27.883	1453.0
294.8	292.3	0.02	28.879	34.721	27.901	1453.5
300.9	298.3	0.08	28.020	34.727	27.903	1453.8
308.3	305.6	0.12	28.094	34.746	27.915	1454.2
316.1	313.3	0.19	28.188	34.787	27.928	1454.7
324.5	321.7	0.24	28.224	34.781	27.937	1455.1

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
45	X		241	1636	Ship	72 41.5	151 13.9
46	X		242	0200	Ship	73 8.6	151 23.0

45



46

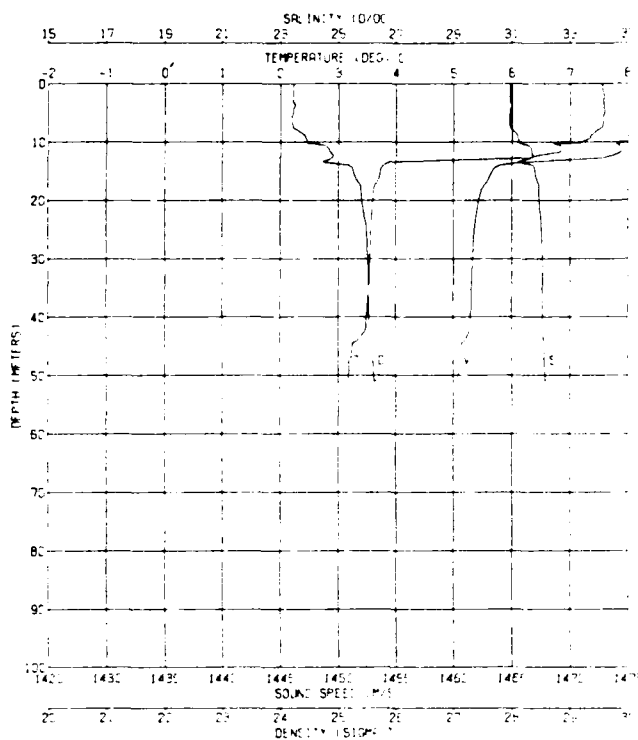


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.6	1.8	-1.36	21.786	26.719	21.486	1431.6
4.5	4.5	-1.41	22.097	27.183	21.846	1432.0
8.6	8.5	-1.41	22.125	27.202	21.877	1432.1
14.7	14.8	-1.32	22.617	27.781	22.345	1433.4
19.8	19.7	-1.25	23.331	28.870	23.062	1435.0
25.0	24.8	-1.28	23.763	29.285	23.558	1436.4
30.1	29.8	-1.28	24.063	29.681	23.880	1436.9
35.3	35.1	-1.29	24.294	30.001	24.138	1436.9
40.5	40.3	-1.30	24.608	30.424	24.489	1437.5
45.7	45.4	-1.31	25.057	31.052	24.988	1438.4
50.9	50.6	-1.35	25.381	31.488	25.350	1438.9
56.0	55.7	-1.39	25.551	31.874	25.589	1439.2
61.2	60.9	-1.41	25.885	31.978	25.739	1439.4
66.5	66.1	-1.43	25.734	32.081	25.832	1439.5
71.6	71.2	-1.44	25.788	32.171	25.897	1439.7
77.0	76.5	-1.44	25.862	32.270	25.977	1439.9
82.2	81.7	-1.44	25.821	32.350	26.041	1440.1
87.5	86.9	-1.46	25.962	32.419	26.098	1440.2
92.6	92.0	-1.46	26.016	32.494	26.159	1440.3
97.9	97.3	-1.47	26.050	32.547	26.201	1440.5
103.1	102.4	-1.48	26.087	32.609	26.252	1440.6
108.4	107.7	-1.50	26.120	32.687	26.299	1440.7
113.7	112.9	-1.51	26.153	32.724	26.346	1440.8
119.0	118.2	-1.52	26.187	32.779	26.391	1440.9
124.2	123.4	-1.53	26.223	32.840	26.440	1441.0
129.6	128.7	-1.54	26.253	32.886	26.478	1441.1
134.7	133.8	-1.56	26.272	32.928	26.512	1441.1
140.0	139.0	-1.57	26.315	32.998	26.589	1441.3
145.2	144.2	-1.58	26.342	33.042	26.605	1441.4
150.5	149.5	-1.59	26.374	33.088	26.643	1441.5
155.8	154.6	-1.58	26.415	33.141	26.685	1441.6
161.0	159.6	-1.59	26.454	33.200	26.734	1441.8
166.3	165.1	-1.60	26.484	33.242	26.767	1441.9
171.6	170.3	-1.60	26.538	33.320	26.831	1442.0
177.0	175.7	-1.61	26.578	33.377	26.877	1442.2
182.6	181.3	-1.58	26.656	33.429	26.919	1442.6
187.9	186.5	-1.54	26.739	33.514	26.987	1442.9
193.7	192.3	-1.55	26.781	33.578	27.039	1443.0
199.8	198.3	-1.51	26.871	33.661	27.105	1443.4
206.5	204.8	-1.27	27.200	33.638	27.241	1444.8
212.9	211.2	-1.30	27.327	33.603	27.285	1444.9
218.5	216.8	-1.16	27.358	33.620	27.304	1445.7
224.6	223.0	-1.13	27.523	34.108	27.455	1446.2
231.0	229.1	-1.04	27.698	34.221	27.544	1446.8
237.2	235.3	-0.80	27.870	34.330	27.622	1448.3
243.3	241.3	-0.83	28.183	34.401	27.673	1448.2
249.3	247.2	-0.58	28.341	34.448	27.707	1449.6
255.1	253.0	-0.46	28.382	34.491	27.738	1450.3
260.8	258.6	-0.39	28.480	34.542	27.776	1450.8
266.6	264.4	-0.31	28.577	34.577	27.801	1451.3
272.6	270.3	-0.26	28.643	34.604	27.820	1451.7
278.6	276.4	-0.20	28.717	34.633	27.841	1452.1
285.0	282.6	-0.13	28.800	34.682	27.881	1452.6
291.3	288.8	-0.08	28.849	34.665	27.861	1452.9
296.6	294.0	-0.05	28.888	34.680	27.871	1453.1
301.8	299.3	-0.03	28.928	34.698	27.884	1453.4
307.5	304.8	0.03	28.988	34.726	27.904	1453.8

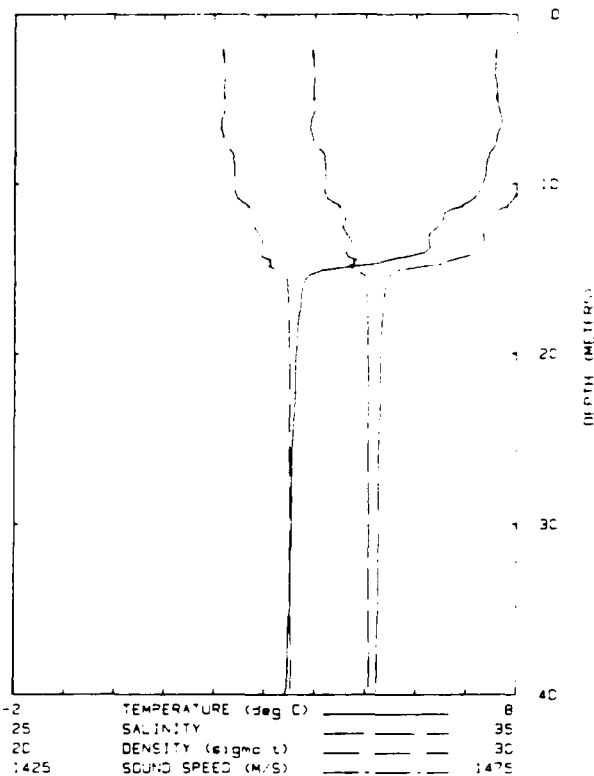
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.7	1.7	-1.43	23.142	28.595	23.004	1433.8
1.8	1.8	-1.42	23.136	28.582	22.993	1433.8
2.6	2.6	-1.50	23.280	28.851	23.211	1433.8
7.8	7.5	-1.51	23.271	28.848	23.208	1433.8
12.8	12.7	-1.51	23.310	28.897	23.249	1434.0
18.8	18.8	-1.47	23.549	28.176	23.474	1434.6
25.9	25.7	-1.33	24.105	28.788	23.866	1436.3
32.9	32.7	-1.32	24.446	30.235	24.328	1437.3
39.8	39.6	-1.36	24.848	30.552	24.585	1437.5
46.8	46.6	-1.42	24.776	30.786	24.776	1437.5
53.8	53.5	-1.40	24.814	30.845	24.904	1437.9
59.6	59.3	-1.33	25.248	31.322	25.207	1438.9
65.4	65.0	-1.35	25.433	31.581	25.428	1439.2
71.2	70.8	-1.38	25.571	31.811	25.604	1439.5
76.5	76.1	-1.40	25.656	31.949	25.716	1439.6
81.8	81.3	-1.43	25.744	32.088	25.829	1439.8
87.1	86.6	-1.43	25.801	32.171	25.897	1440.0
92.5	91.9	-1.44	25.878	32.285	25.989	1440.2
97.7	97.1	-1.44	25.947	32.378	26.064	1440.4
103.1	102.4	-1.44	26.013	32.465	26.135	1440.6
108.3	107.6	-1.46	26.050	32.532	26.189	1440.6
113.8	112.8	-1.48	26.071	32.574	26.224	1440.7
119.2	118.4	-1.49	26.116	32.651	26.286	1440.8
124.6	123.9	-1.51	26.151	32.709	26.334	1440.9
130.2	129.3	-1.52	26.187	32.771	26.385	1441.0
135.5	134.6	-1.53	26.226	32.835	26.437	1441.2
140.9	139.9	-1.54	26.261	32.880	26.481	1441.3
146.3	145.3	-1.55	26.297	32.950	26.530	1441.4
151.7	150.6	-1.56	26.324	32.986	26.568	1441.5
157.1	156.0	-1.57	26.362	33.055	26.616	1441.6
162.5	161.3	-1.58	26.391	33.088	26.651	1441.7
167.9	166.7	-1.58	26.433	33.154	26.696	1441.9
173.3	172.0	-1.58	26.482	33.218	26.746	1442.0
178.8	177.5	-1.57	26.533	33.274	26.793	1442.3
184.3	182.9	-1.55	26.605	33.347	26.852	1442.5
189.8	188.4	-1.53	26.679	33.425	26.915	1442.8
195.5	194.0	-1.48	26.786	33.508	26.980	1443.3
201.2	199.8	-1.40	26.914	33.588	27.051	1443.8
206.7	205.1	-1.33	27.048	33.686	27.129	1444.4
212.3	210.7	-1.21	27.251	33.832	27.234	1445.3
218.0	216.3	-1.10	27.428	33.951	27.327	1446.0
223.7	222.0	-0.99	27.583	34.048	27.402	1446.8
229.4	227.6	-0.92	27.704	34.119	27.457	1447.3
235.3	233.4	-0.79	27.816	34.239	27.568	1448.8
241.4	239.5	-0.69	28.047	34.314	27.605	1449.4
247.7	245.8	-0.61	28.189	34.382	27.657	1449.4
253.4	251.3	-0.52	28.303	34.455	27.712	1450.0
259.1	256.9	-0.47	28.388	34.487	27.735	1450.3
264.8	262.4	-0.40	28.487	34.528	27.768	1450.8
270.2	268.9	-0.31	28.572	34.571	27.796	1451.4
275.8	273.4	-0.28	28.625	34.598	27.816	1451.7
281.7	279.3	-0.24	28.674	34.621	27.833	1452.0
287.7	285.2	-0.18	28.741	34.645	27.850	1452.3
293.7	280.2	-0.18	28.781	34.660	27.860	1452.6
299.4	285.9	-0.12	28.824	34.672	27.868	1452.9
304.3	301.8	-0.07	28.892	34.698	27.887	1453.2
311.5	308.8	0.01	28.974	34.716	27.897	1453.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
47		X	245	0524	Ship	70 50.7	160 34.9
48	X						

47



48



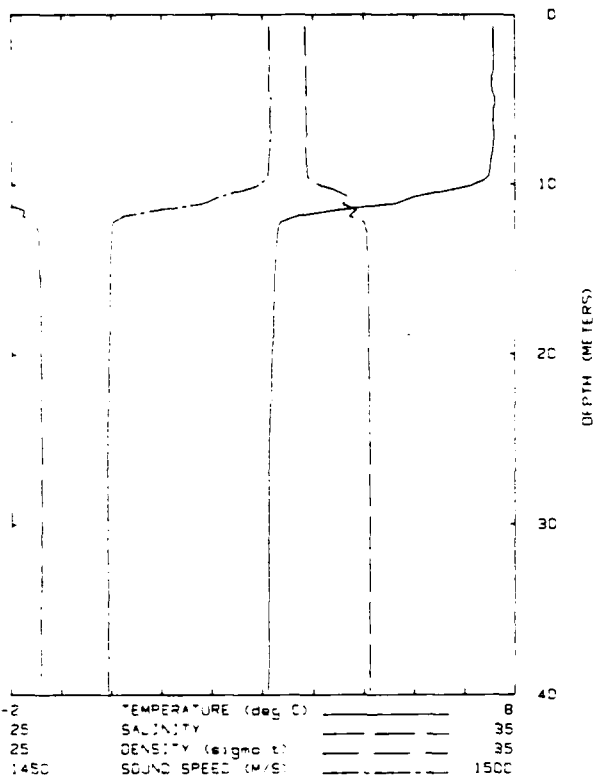
DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	7.59	1476.3	24.22	30.95
10.1	7.18	1475.4	24.48	31.22
15.0	3.73	1463.3	25.25	31.78
20.4	3.59	1462.1	25.40	31.93
25.1	3.55	1461.8	25.48	32.02
30.2	3.54	1461.6	25.51	32.04
35.4	3.52	1461.6	25.52	32.05
40.1	3.48	1461.5	25.53	32.06
45.1	3.24	1460.6	25.59	32.11
50.3	3.17	1460.4	25.61	32.13
51.1	3.17	1460.4	25.65	32.18

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/S)
6.3	6.3	7.70	32.120	30.908	24.130	1476.3
11.5	11.4	6.87	31.888	31.510	24.714	1473.9
17.4	17.3	3.72	28.837	32.050	25.493	1461.8
22.3	22.2	3.61	28.754	32.058	25.510	1461.5
27.8	27.7	3.54	28.710	32.066	25.522	1461.3
33.1	32.9	3.53	28.701	32.067	25.524	1461.3
38.2	38.0	3.46	28.657	32.076	25.537	1461.1
38.4	38.2	3.46	28.657	32.078	25.539	1461.1
38.8	38.5	3.46	28.655	32.076	25.537	1461.1
41.5	41.3	3.32	28.540	32.079	25.552	1460.6
42.4	42.2	3.26	28.533	32.127	25.595	1460.4
41.4	41.1	3.27	28.539	32.120	25.589	1460.4
37.2	37.0	3.46	28.658	32.077	25.538	1461.1
32.2	32.0	3.52	28.700	32.070	25.526	1461.3
27.5	27.4	3.54	28.708	32.067	25.523	1461.3
22.7	22.5	3.59	28.742	32.063	25.515	1461.4
17.3	17.2	3.85	28.784	32.061	25.508	1461.6
12.2	12.1	6.22	31.591	31.871	24.922	1471.5
5.6	5.6	7.67	31.751	30.962	24.177	1476.2
2.7	2.7	7.60	32.117	30.847	24.175	1475.9

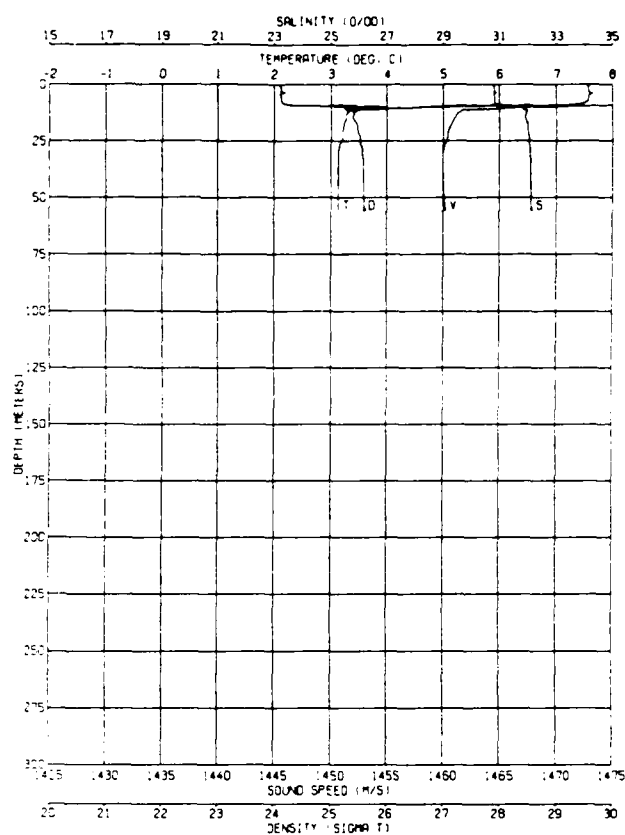
Station Number 49 50 ASL Cast X APL Cast X Julian Day 245 GMT hhmm 0626 Platform Ship Latitude 70 55.8 Longitude 160 10.8

49



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.7	2.7	7.57	31.863	30.850	24.103	1475.7
7.5	7.5	7.57	31.864	30.848	24.101	1475.7
12.7	12.6	3.31	29.488	32.036	25.519	1460.0
17.6	17.7	3.20	29.456	32.102	25.581	1458.7
22.8	22.7	3.16	29.426	32.102	25.584	1458.8
28.0	27.9	3.13	29.414	32.122	25.604	1459.6
33.5	33.3	3.12	29.413	32.124	25.606	1459.6
38.7	38.5	3.12	29.411	32.123	25.605	1459.7
42.1	41.9	3.12	29.413	32.123	25.605	1459.8
42.2	42.0	3.12	29.416	32.125	25.607	1459.8
40.7	40.5	3.12	29.418	32.127	25.608	1459.8
35.8	35.7	3.12	29.417	32.126	25.607	1459.7
31.4	31.2	3.14	29.421	32.118	25.599	1459.7
26.2	26.0	3.14	29.420	32.114	25.586	1459.6
21.1	21.0	3.19	29.444	32.102	25.584	1459.7
16.1	16.1	3.21	29.456	32.100	25.579	1459.7
11.5	11.5	3.60	30.160	22.260	25.731	1462.5
7.0	7.0	7.56	31.867	30.861	24.113	1475.7
2.3	2.3	7.58	31.865	30.849	24.101	1475.7

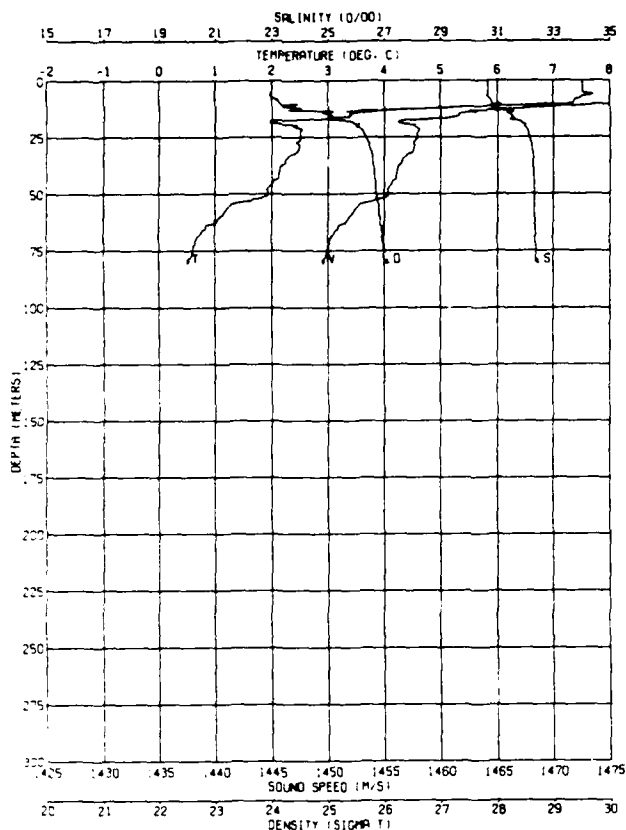
50



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.58	1476.1	24.12	30.82
10.4	4.13	1465.3	25.40	32.02
15.3	3.26	1460.7	25.48	32.00
20.3	3.20	1460.2	25.55	32.06
25.2	3.17	1460.0	25.57	32.08
30.3	3.13	1459.9	25.60	32.11
35.0	3.13	1459.9	25.61	32.12
40.1	3.13	1459.9	25.60	32.11
45.1	3.12	1460.0	25.60	32.10
50.0	3.12	1460.1	25.60	32.10
55.2	3.12	1460.1	25.59	32.10
55.7	3.12	1460.1	25.59	32.09

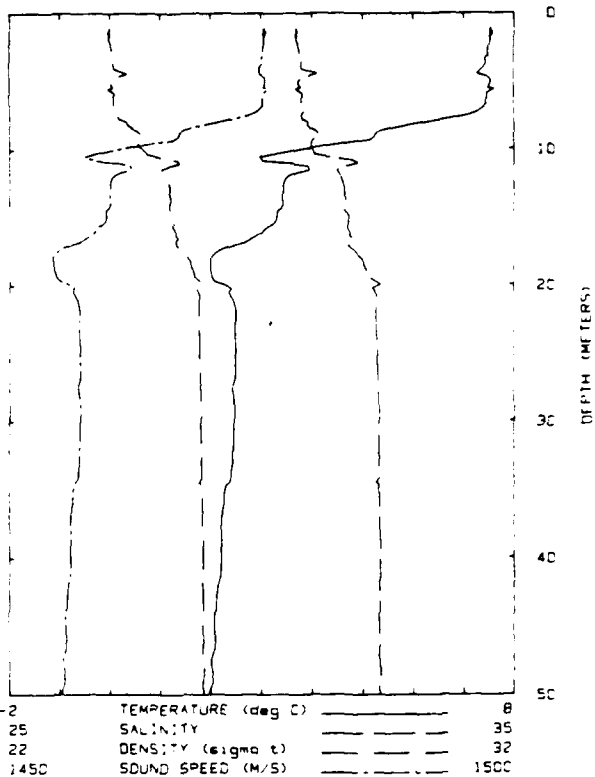
Station Number 51
ASL Cast X
APL Cast X
Julian Day 245
GMT hhmm 0819
Platform Ship
Latitude 71 2.2
Longitude 159 39.1

51



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	7.52	1475.6	24.01	30.63
10.5	7.12	1474.9	24.22	30.90
15.0	3.42	1461.4	25.06	31.50
20.1	2.40	1457.3	25.63	32.09
25.2	2.51	1457.6	25.77	32.27
30.2	2.47	1457.4	25.81	32.32
35.1	2.24	1456.5	25.85	32.34
40.3	2.13	1456.0	25.85	32.34
45.1	2.01	1455.6	25.88	32.35
50.3	1.94	1455.3	25.88	32.35
55.3	1.24	1452.6	25.93	32.36
60.2	1.06	1451.8	25.95	32.37
65.4	.82	1450.8	25.99	32.40
70.3	.66	1450.1	26.00	32.41
75.1	.61	1449.8	26.00	32.40
80.1	.51	1449.5	26.02	32.42
80.3	.51	1449.5	26.02	32.42

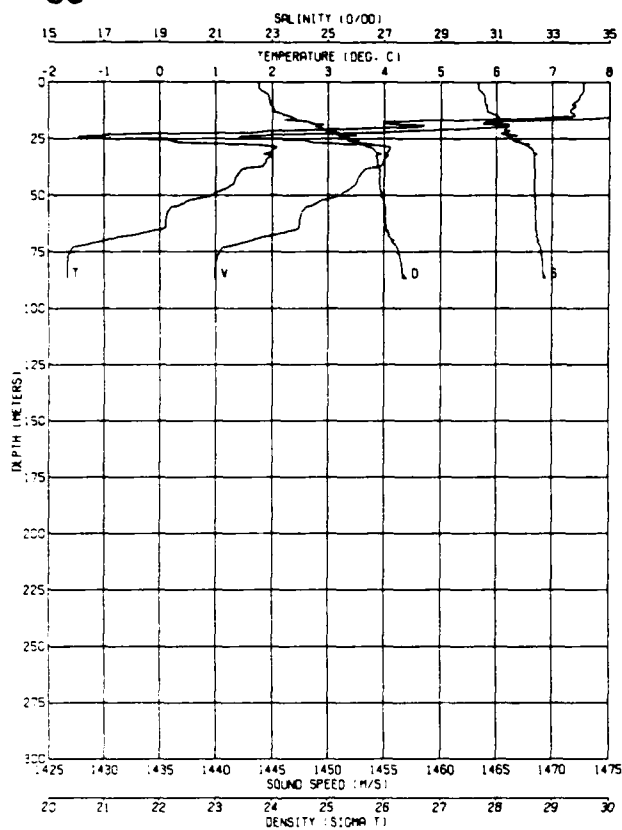
52



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.6	1.6	7.52	31.787	30.708	23.897	1475.3
1.4	1.4	7.52	31.781	30.702	23.884	1475.3
3.5	3.5	7.42	31.794	30.803	24.087	1475.0
8.5	8.5	5.55	30.405	30.864	24.444	1467.9
13.5	13.4	3.42	29.252	31.844	25.198	1460.0
18.5	18.4	2.00	28.408	32.024	25.614	1454.4
23.6	23.5	2.49	28.010	32.276	25.778	1456.9
28.6	28.6	2.47	28.038	32.319	25.814	1457.0
34.0	33.8	2.41	28.893	32.330	25.828	1456.8
38.8	38.7	2.21	28.848	32.348	25.857	1456.1
44.1	43.8	2.10	28.750	32.338	25.859	1455.7
48.2	48.9	2.05	28.724	32.349	25.870	1455.6
52.7	52.4	1.98	28.877	32.365	25.888	1455.3
52.7	52.4	1.98	28.877	32.365	25.888	1455.3
50.0	49.7	1.98	28.867	32.358	25.881	1455.2
44.9	44.7	2.08	28.750	32.347	25.865	1455.6
39.8	39.6	2.19	28.840	32.353	25.863	1456.0
34.8	34.6	2.30	28.944	32.382	25.878	1456.4
29.9	29.8	2.47	28.039	32.326	25.820	1457.0
24.9	24.8	2.49	28.026	32.287	25.787	1457.0
19.6	19.5	2.20	28.463	31.813	25.510	1455.2
14.8	14.8	3.32	29.288	31.782	25.316	1459.8
9.8	9.7	5.40	30.560	31.278	24.708	1467.7
4.5	4.4	7.42	31.784	30.782	24.078	1475.0

Station Number 53
ASL Cast X
APL Cast X
Julian Day 245
GMT hhmm 0922
Platform Ship
Latitude 71 7.0
Longitude 159 19.4

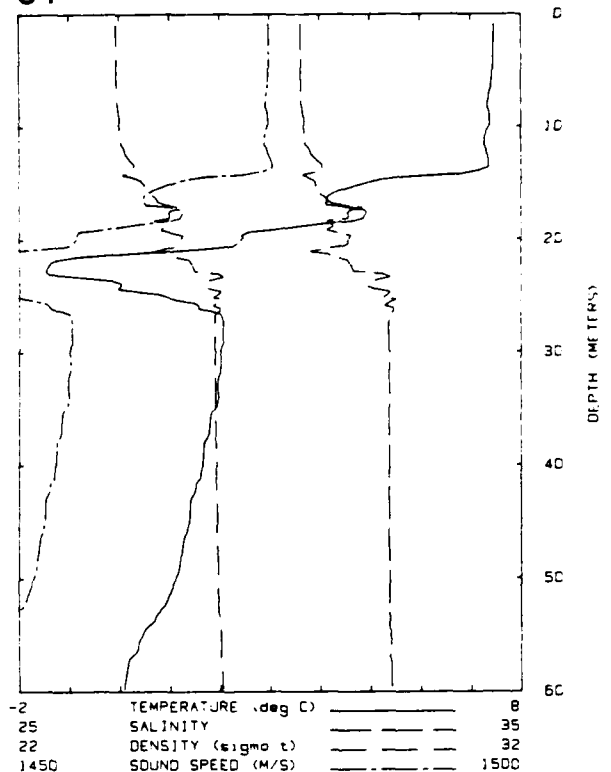
53



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	7.50	1475.4	23.91	30.54
10.1	7.39	1475.1	23.97	30.60
15.1	7.24	1475.5	24.36	31.08
20.3	3.69	1463.1	25.04	31.52
25.1	-1.32	1444.1	25.42	31.63
30.2	2.00	1455.1	25.92	32.40
35.1	1.89	1454.8	25.93	32.40
40.2	1.38	1452.8	25.95	32.39
45.0	1.29	1452.4	25.95	32.39
50.2	-0.89	1450.9	25.99	32.40
55.3	-1.19	1447.9	26.06	32.44
60.1	-1.10	1447.4	26.05	32.42
65.1	-1.08	1446.8	26.07	32.45
70.3	-1.05	1442.7	26.20	32.56
75.6	-1.63	1440.1	26.29	32.65
80.2	-1.67	1439.9	26.35	32.72
85.1	-1.67	1439.8	26.34	32.72
86.7	-1.67	1439.9	26.40	32.78

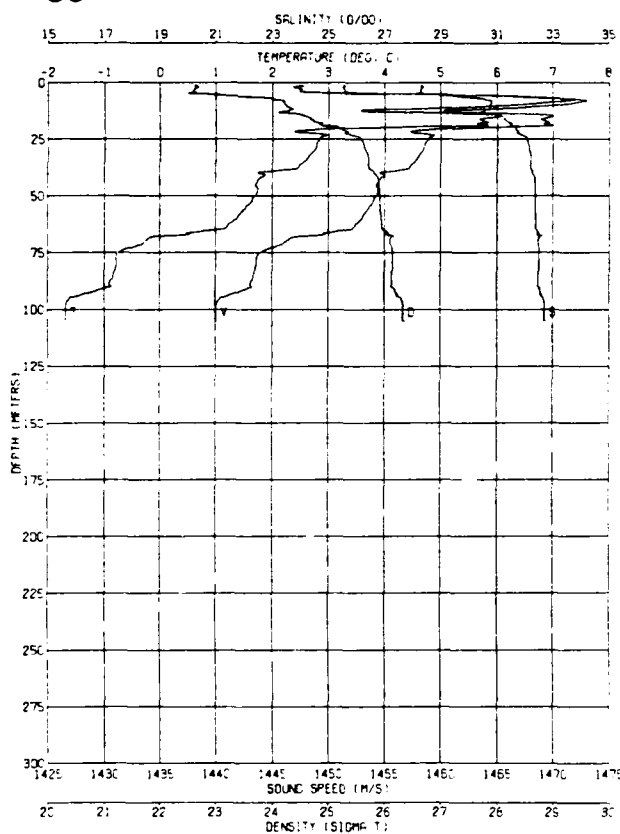
54



DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.8	7.43	31.628	30.618	23.940	1474.9
10.5	7.30	31.606	30.701	24.022	1474.6
16.3	4.14	29.380	31.099	24.498	1462.4
21.5	-0.05	28.114	31.179	25.052	1444.1
26.8	2.00	28.711	32.396	25.911	1455.0
32.1	2.00	28.682	32.384	25.886	1455.0
37.3	1.78	28.518	32.380	25.914	1454.2
42.5	1.50	28.287	32.368	25.923	1453.0
47.7	1.24	28.086	32.379	25.949	1452.0
52.8	0.89	27.800	32.382	25.973	1450.5
58.0	0.18	27.250	32.424	26.044	1447.3
63.1	-0.04	27.091	32.434	26.062	1446.4
68.9	-0.19	26.884	32.446	26.077	1445.8
74.9	-0.22	26.864	32.448	26.080	1445.7
80.0	-0.22	26.863	32.453	26.084	1445.7
85.2	-0.05	27.090	32.436	26.063	1446.4
90.4	0.18	27.251	32.432	26.050	1447.3
95.7	0.71	27.687	32.419	26.012	1449.7
100.0	1.19	28.057	32.399	25.968	1451.8
104.2	1.43	28.246	32.396	25.950	1452.8
108.6	1.71	28.470	32.387	25.924	1453.9
113.0	1.94	28.652	32.383	25.906	1454.9
117.4	2.06	28.748	32.383	25.897	1455.3
121.8	-0.03	26.738	31.874	25.691	1445.3
126.2	2.38	28.683	32.250	25.768	1456.3
130.6	4.82	31.650	33.086	26.202	1467.7
135.0	7.35	31.580	30.833	23.963	1474.6
139.4	7.40	31.623	30.834	23.957	1474.8

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
55			245	1033	Ship	71 11.8	158 52.6
56	X	X					

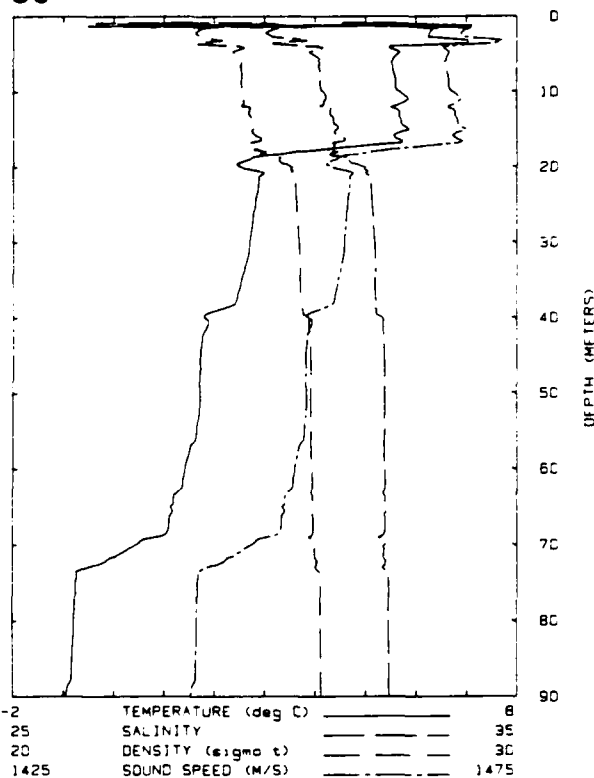
55



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	5.03	1459.9	23.06	29.02
10.4	5.00	1469.3	24.24	30.73
15.1	5.99	1469.9	24.63	31.22
20.4	3.08	1461.0	25.21	31.66
25.4	2.83	1458.9	25.59	32.08
30.3	2.74	1458.4	25.66	32.16
35.0	2.55	1457.7	25.70	32.19
40.1	1.80	1454.7	25.83	32.28
45.1	1.71	1454.3	25.90	32.36
50.2	1.69	1454.3	25.92	32.38
55.1	1.53	1453.6	25.93	32.37
60.1	1.38	1453.0	25.94	32.38
65.2	.95	1451.5	26.01	32.44
70.0	-.27	1446.2	26.11	32.48
75.0	-.75	1444.0	26.16	32.52
80.2	-.80	1443.6	26.13	32.49
85.3	-.84	1443.4	26.13	32.49
90.1	-.88	1443.3	26.13	32.48
95.1	-1.61	1440.5	26.32	32.69
100.1	-1.67	1440.1	26.34	32.72
105.1	-1.67	1440.1	26.37	32.74

56

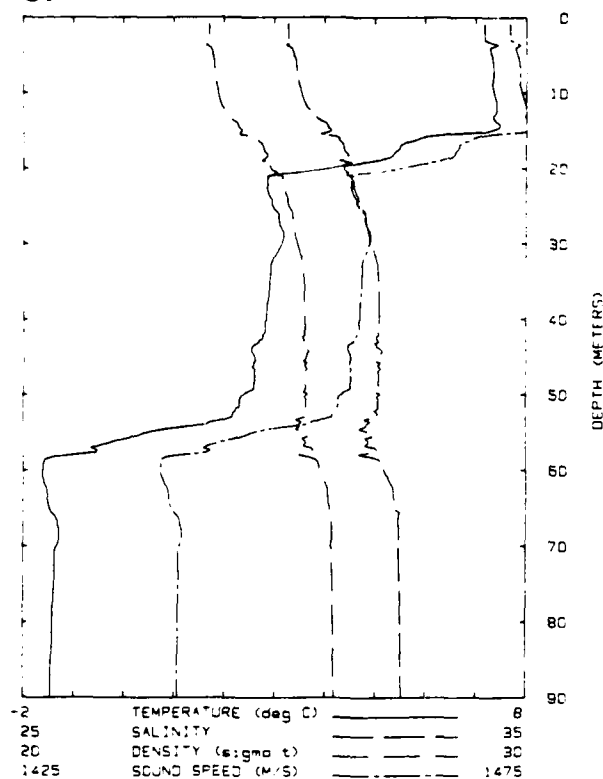


PRESSURE (dBar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (MS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

1.7	1.7	6.33	30.345	30.195	23.747	1470.0
8.2	8.1	5.58	30.580	31.103	24.548	1488.2
14.1	14.0	5.71	30.887	31.389	24.745	1489.1
19.6	19.5	2.48	28.558	31.718	25.332	1456.2
24.3	24.2	2.83	28.178	32.130	25.634	1458.3
29.8	29.7	2.71	28.117	32.180	25.685	1457.8
35.7	35.5	2.53	28.089	32.198	25.714	1457.2
41.5	41.3	1.85	28.584	32.380	25.893	1454.6
47.2	46.9	1.72	28.475	32.376	25.915	1454.1
52.5	52.2	1.70	28.468	32.361	25.920	1454.1
58.1	57.8	1.51	28.302	32.371	25.925	1453.3
63.9	63.5	1.21	28.086	32.383	25.954	1452.1
69.7	69.3	0.82	27.576	32.368	25.975	1449.5
75.2	74.8	-0.76	26.544	32.458	26.109	1443.4
81.3	80.8	-0.79	26.522	32.465	26.116	1443.3
87.5	86.9	-0.84	26.488	32.469	26.121	1443.2
92.7	92.1	-1.03	26.376	32.513	26.162	1442.4
92.6	92.0	-1.00	26.383	32.508	26.157	1442.5
92.7	92.1	-0.89	26.404	32.513	26.161	1442.6
88.9	88.3	-0.85	26.484	32.472	26.124	1443.1
82.7	82.2	-0.79	26.528	32.470	26.120	1443.3
76.4	75.9	-0.78	26.544	32.462	26.112	1443.4
70.5	70.1	0.80	27.818	32.434	26.030	1449.5
64.9	64.5	1.28	28.122	32.401	25.985	1452.7
59.6	59.3	1.50	28.308	32.388	25.941	1453.3
53.7	53.4	1.71	28.475	32.387	25.925	1454.2
47.6	47.3	1.71	28.488	32.377	25.916	1454.1
41.5	41.3	2.02	28.658	32.310	25.841	1455.2
35.6	35.4	2.63	28.073	32.203	25.709	1457.7
30.1	29.9	2.77	28.148	32.157	25.681	1458.1
24.0	23.8	3.03	29.185	31.943	25.489	1458.9
18.2	18.1	5.55	30.852	31.462	24.837	1488.7
11.6	11.6	5.23	30.041	30.853	24.393	1466.5
5.9	5.8	6.86	31.013	30.456	23.888	1472.5

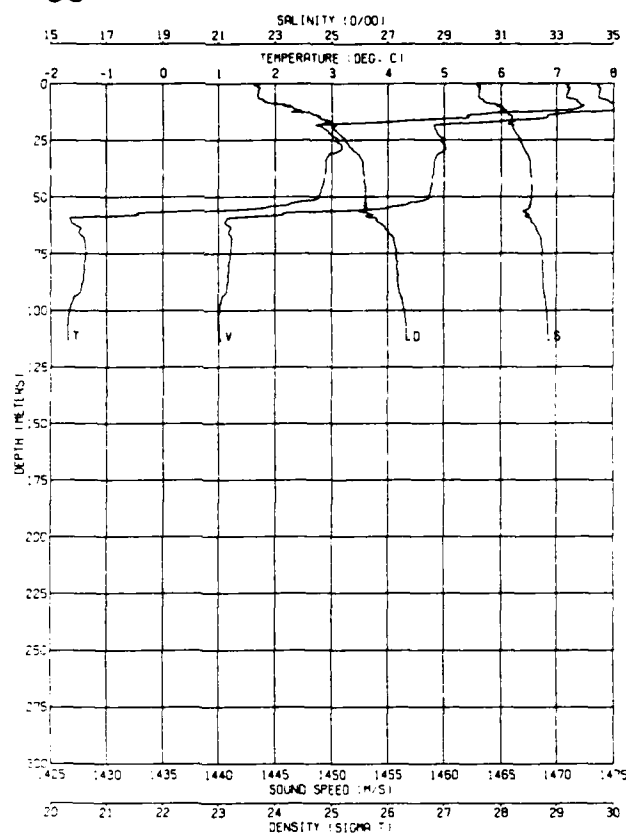
Station Number 57 58
 ASL Cast X
 APL Cast X
 Julian Day 245
 GMT hhmm 1135
 Platform Ship
 Latitude 71 16.9
 Longitude 158 28.2

57



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
5.1	5.1	7.31	31.307	30.373	23.764	1474.1
10.7	10.8	7.39	31.541	30.559	23.900	1474.7
15.9	15.8	6.00	31.017	31.238	24.608	1470.2
21.6	21.5	2.84	28.700	31.544	25.187	1457.5
27.5	27.3	3.10	29.139	31.818	25.364	1459.1
33.9	33.7	2.82	29.196	32.082	25.573	1458.7
40.1	38.9	2.84	29.154	32.090	25.602	1458.5
45.7	45.4	2.61	28.953	32.066	25.601	1457.6
51.9	51.6	2.31	28.897	32.057	25.619	1456.3
58.0	57.7	-0.56	26.266	31.892	25.646	1443.2
64.8	64.2	-1.50	25.903	32.397	26.081	1439.6
71.2	70.8	-1.37	26.067	32.479	26.145	1440.4
78.1	77.6	-1.41	26.081	32.505	26.186	1440.4
84.8	84.3	-1.44	26.050	32.521	26.180	1440.4
91.5	91.0	-1.46	26.056	32.548	26.202	1440.4
97.8	97.1	-1.64	26.005	32.670	26.305	1439.8
97.8	97.2	-1.64	26.007	32.676	26.310	1439.8
97.5	96.9	-1.63	26.010	32.671	26.308	1439.8
91.1	90.5	-1.46	26.061	32.559	26.211	1440.4
84.6	84.0	-1.42	26.081	32.539	26.194	1440.5
78.1	77.7	-1.41	26.073	32.535	26.183	1440.4
71.2	70.8	-1.39	26.068	32.500	26.162	1440.4
64.6	64.3	-1.51	25.884	32.377	26.065	1439.5
57.9	57.5	-0.18	26.711	32.090	25.791	1445.2
51.4	51.1	2.48	28.898	32.118	25.652	1457.2
45.2	44.9	2.78	29.115	32.095	25.611	1458.3
39.4	39.2	2.87	29.193	32.069	25.598	1458.6
32.9	32.6	3.01	29.216	31.998	25.515	1459.0
26.1	25.9	3.11	29.075	31.735	25.297	1459.0
20.5	20.4	2.78	28.598	31.485	25.128	1457.1
14.3	14.3	6.02	31.112	31.322	24.672	1470.3
8.4	8.4	7.34	31.389	30.448	23.619	1474.4
2.6	2.6	7.20	31.138	30.284	23.717	1473.5

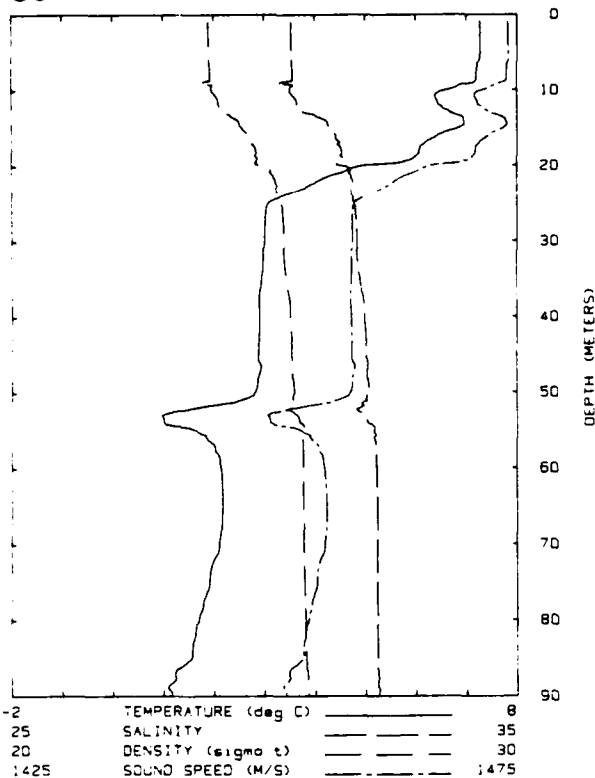
58



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.18	1473.7	23.70	30.22
10.1	7.48	1475.8	24.25	30.96
15.0	5.44	1469.2	24.77	31.36
20.1	2.87	1459.2	25.03	31.41
25.1	3.07	1459.8	25.25	31.69
30.2	3.10	1459.9	25.42	31.89
35.0	2.89	1459.2	25.57	32.06
40.1	2.88	1459.0	25.57	32.06
45.0	2.83	1458.9	25.59	32.08
50.2	2.79	1458.8	25.62	32.11
55.1	1.72	1454.6	25.58	31.97
60.5	-1.63	1440.6	25.79	32.05
65.2	-1.49	1440.9	26.00	32.31
70.4	-1.38	1441.1	26.11	32.44
75.1	-1.38	1441.0	26.14	32.48
80.2	-1.40	1440.9	26.16	32.50
85.4	-1.41	1440.8	26.18	32.52
90.2	-1.46	1440.7	26.19	32.53
95.2	-1.60	1440.3	26.27	32.62
100.1	-1.66	1440.1	26.30	32.66
110.1	-1.70	1440.1	26.33	32.70
113.6	-1.70	1440.1	26.35	32.72

Station Number 59 60 ASL Cast X APL Cast X Julian Day 245 GMT hhmm 1300 Platform Ship Latitude 71 21.4 Longitude 157 55.2

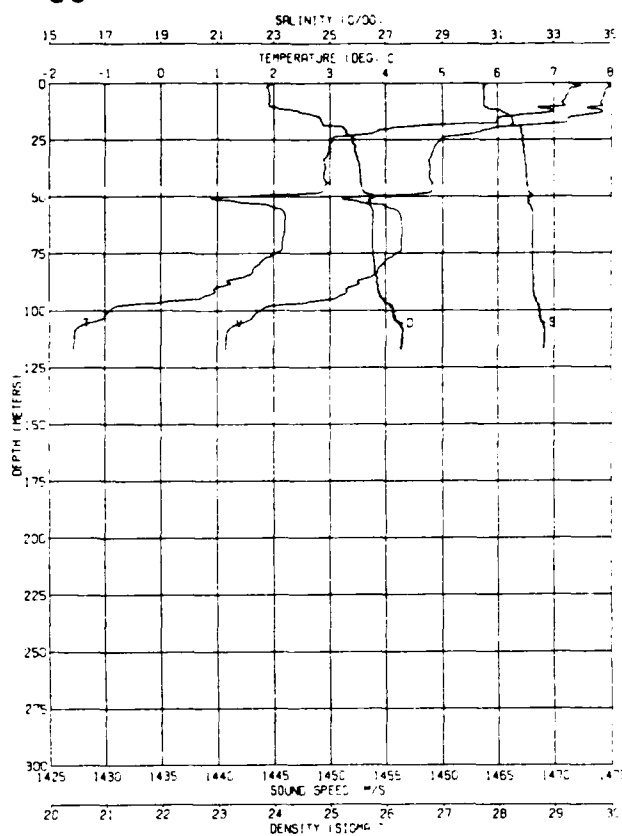
59



PRESSURE (dBar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

8.7	9.8	8.81	31.034	30.528	23.850	1473.4
15.3	15.2	8.77	31.727	31.310	24.589	1473.3
20.5	20.4	4.73	30.373	31.894	25.110	1485.7
25.8	25.5	3.04	29.082	31.808	25.381	1458.8
30.8	30.7	2.89	29.089	31.844	25.394	1458.7
35.9	35.7	2.83	29.086	31.817	25.458	1458.6
41.1	40.8	2.80	29.134	31.894	25.521	1458.8
46.2	46.0	2.89	29.175	32.057	25.572	1458.8
51.4	51.1	2.48	28.828	32.042	25.593	1457.1
56.5	56.1	1.87	28.488	32.208	25.770	1454.7
61.8	61.2	2.15	28.721	32.234	25.771	1458.0
66.8	66.2	2.15	28.730	32.243	25.778	1458.1
71.8	71.2	2.08	28.885	32.237	25.778	1455.8
76.5	76.1	1.87	28.502	32.240	25.786	1455.1
81.8	81.1	1.64	28.322	32.248	25.818	1454.1
86.4	85.8	1.42	28.151	32.257	25.840	1453.2
91.3	90.7	0.87	27.700	32.254	25.871	1450.8
96.1	95.5	0.29	27.251	32.271	25.915	1448.3
101.2	95.8	0.11	27.141	32.315	25.958	1447.5
106.0	95.4	0.29	27.292	32.323	25.957	1448.4
110.9	95.2	0.27	27.284	32.308	25.846	1448.2
115.8	92.0	0.86	27.738	32.287	25.808	1450.8
120.4	88.0	1.23	28.005	32.288	25.858	1452.4
124.4	81.8	1.85	28.335	32.257	25.825	1454.2
127.4	76.9	1.91	28.540	32.252	25.803	1455.2
132.5	72.1	2.09	28.688	32.253	25.790	1458.0
137.7	67.3	2.18	28.739	32.247	25.780	1458.2
142.8	62.5	2.18	28.754	32.243	25.776	1458.2
147.1	57.7	2.14	28.880	32.218	25.759	1455.8
151.1	52.8	0.78	27.391	31.882	25.887	1449.4
156.2	47.9	2.87	28.150	32.051	25.588	1458.7
161.0	42.8	2.88	28.122	32.008	25.533	1458.6
165.8	37.7	2.80	28.108	31.872	25.503	1458.8
170.5	32.3	2.85	28.087	31.878	25.422	1458.8
175.1	27.0	3.02	28.087	31.838	25.387	1458.7
179.7	21.8	3.81	28.829	31.851	25.317	1462.5
184.2	16.1	6.01	31.305	31.849	24.847	1470.8
188.8	9.8	7.31	31.481	30.570	23.818	1474.4
193.4	4.8	7.28	31.427	30.550	23.810	1474.1

60

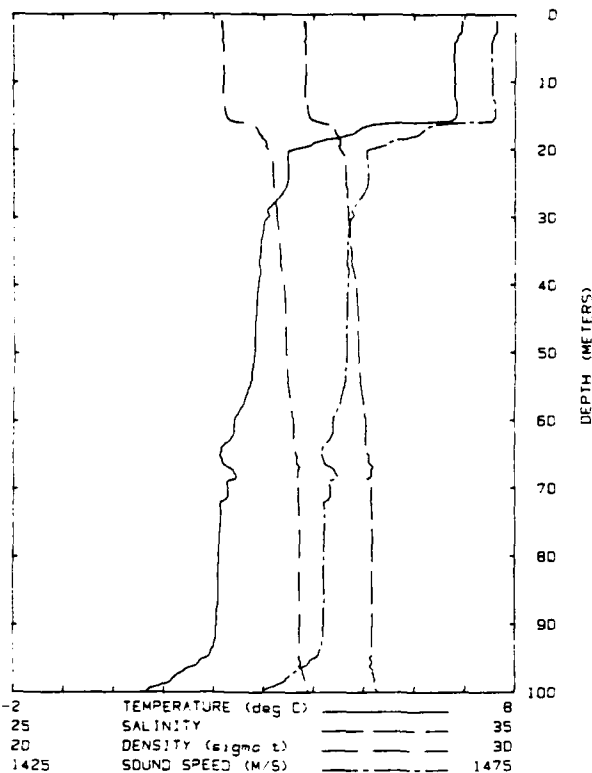


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

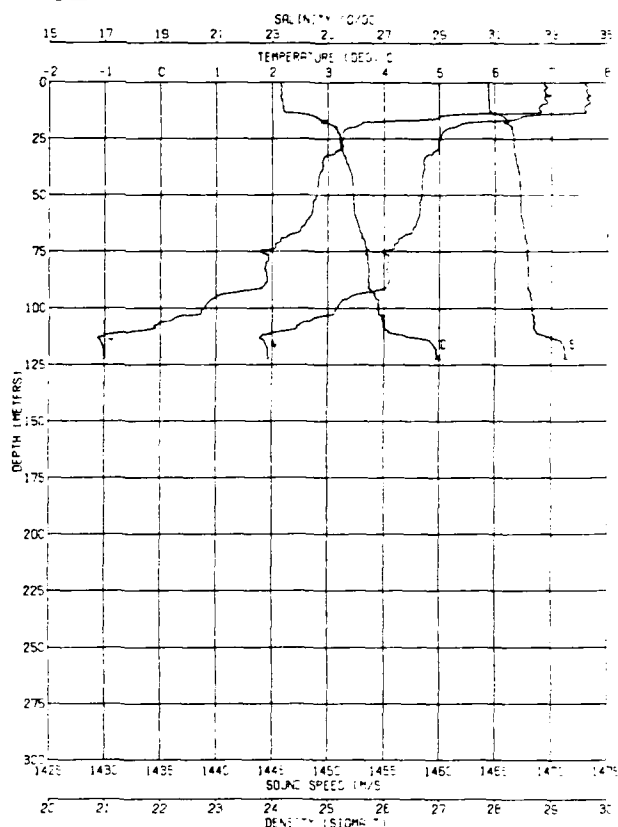
5.1	7.25	1474.4	23.92	30.51
10.4	7.19	1474.3	23.94	30.53
15.4	6.03	1471.5	24.81	31.49
20.3	4.04	1464.5	25.23	31.79
25.2	3.04	1460.1	25.34	31.80
30.1	2.98	1459.4	25.38	31.84
35.1	2.90	1459.0	25.47	31.94
40.1	2.90	1458.9	25.52	31.99
45.0	2.91	1459.0	25.55	32.02
50.0	1.11	1452.5	25.69	32.07
55.1	2.04	1455.5	25.73	32.17
60.1	2.20	1456.3	25.76	32.22
65.1	2.20	1456.4	25.76	32.22
70.0	2.15	1456.3	25.76	32.21
75.1	2.03	1455.9	25.77	32.22
80.3	1.72	1454.7	25.79	32.22
85.0	1.50	1453.9	25.81	32.23
90.2	.96	1451.7	25.86	32.24
95.1	.62	1450.3	25.89	32.27
100.1	-.92	1443.9	26.06	32.40
110.1	-1.55	1440.9	26.25	32.60
117.2	-1.56	1440.7	26.25	32.60

Station Number 61 62 ASL Cast X APL Cast X Julian Day 245 GMT hhmm 1409 Platform Ship Latitude 71 24.9 Longitude 157 31.9

61



62

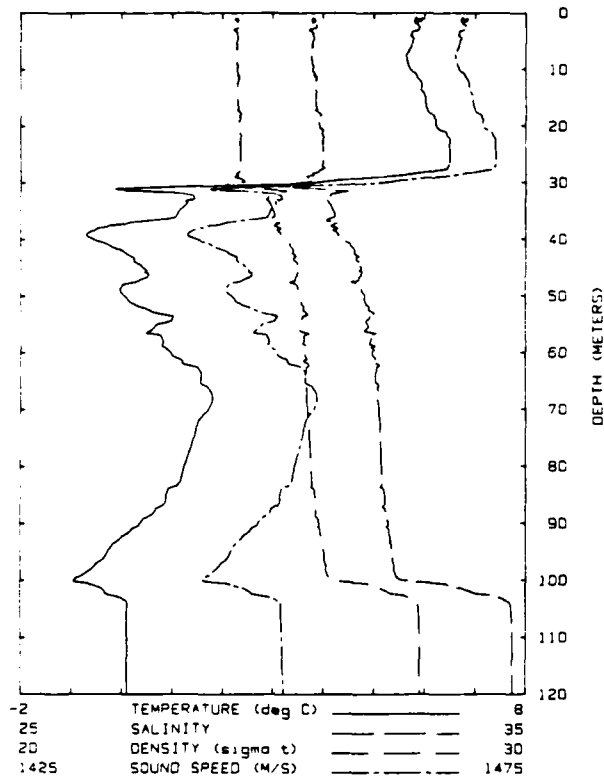


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.5	1.5	8.94	31.427	30.832	24.172	1473.2
2.1	2.1	8.94	31.422	30.831	24.172	1473.2
7.4	7.4	8.70	31.303	30.833	24.192	1472.7
12.7	12.6	8.82	31.344	30.851	24.203	1472.9
17.9	17.8	4.76	30.177	31.445	24.811	1485.4
23.1	22.9	3.49	29.304	31.837	25.188	1480.4
28.3	28.1	3.16	29.083	31.886	25.253	1459.2
33.3	33.1	2.94	28.931	31.717	25.286	1458.4
38.5	38.2	2.82	28.885	31.800	25.365	1458.5
44.8	44.3	2.83	28.988	31.866	25.424	1458.2
50.8	50.5	2.78	28.952	31.887	25.444	1458.2
57.1	56.8	2.83	28.896	31.974	25.430	1457.7
63.3	62.9	2.32	28.897	32.035	25.599	1456.6
68.8	68.4	2.48	28.891	32.134	25.668	1457.4
75.0	74.5	2.14	28.880	32.169	25.720	1458.1
81.3	80.8	2.08	28.830	32.173	25.726	1458.1
87.4	86.9	2.09	28.821	32.186	25.721	1458.1
93.8	93.2	2.00	28.558	32.173	25.733	1458.8
99.3	98.6	1.07	27.811	32.180	25.800	1451.8
101.2	100.5	0.66	27.582	32.289	25.809	1450.2
101.3	100.7	0.71	27.604	32.284	25.803	1450.3
101.4	100.7	0.75	27.630	32.282	25.800	1450.5
101.4	100.8	0.74	27.624	32.279	25.898	1450.4
96.9	96.3	1.28	28.013	32.244	25.840	1452.7
90.7	90.1	2.03	28.581	32.178	25.734	1455.9
84.2	83.7	2.09	28.627	32.174	25.727	1456.0
78.4	77.9	2.11	28.642	32.172	25.724	1456.0
72.4	72.0	2.28	28.732	32.135	25.884	1456.6
67.5	67.1	2.13	28.576	32.078	25.848	1455.8
61.7	61.3	2.58	28.873	32.008	25.580	1457.5
55.8	55.4	2.74	28.941	31.924	25.479	1458.1
50.0	49.7	2.79	28.957	31.890	25.488	1458.2
43.9	43.6	2.83	28.968	31.885	25.423	1458.4
38.7	38.4	2.91	28.874	31.785	25.381	1458.4
32.9	32.7	3.05	29.015	31.713	25.284	1458.8
27.2	27.1	3.38	29.223	31.858	25.214	1480.0
21.4	21.3	3.35	28.188	31.844	25.204	1459.8
16.1	16.1	6.94	30.280	31.400	24.855	1488.1
10.8	10.7	8.80	31.302	30.823	24.184	1472.7
5.7	5.7	8.95	31.385	30.784	24.134	1473.2

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	6.90	1473.3	24.17	30.78
10.3	6.81	1473.1	24.18	30.78
15.0	4.95	1467.3	24.79	31.33
20.3	3.40	1461.3	25.07	31.51
25.1	3.27	1460.3	25.16	31.59
30.1	3.24	1460.0	25.17	31.60
35.0	2.91	1458.7	25.29	31.71
40.1	2.87	1458.6	25.38	31.81
45.1	2.82	1458.5	25.41	31.85
50.2	2.80	1458.4	25.42	31.86
55.3	2.75	1458.3	25.45	31.89
60.2	2.67	1458.1	25.49	31.93
65.1	2.52	1457.7	25.55	32.00
70.2	2.15	1456.3	25.64	32.07
75.3	1.78	1454.9	25.68	32.09
80.1	1.90	1455.3	25.69	32.11
85.1	1.91	1455.4	25.72	32.15
90.2	1.85	1455.3	25.72	32.14
95.3	.99	1452.0	25.83	32.22
100.1	.77	1450.8	25.88	32.25
110.1	-1.37	1446.4	26.03	32.38
120.1	-1.02	1444.7	26.92	33.45
122.4	-1.02	1444.8	27.03	33.59

Station ASL APL Julian GMT Platform Latitude Longitude
 Number Cast Cast Day hhmm
 63 X X 245 1530 Ship 71 28.7 157 5.3
 64

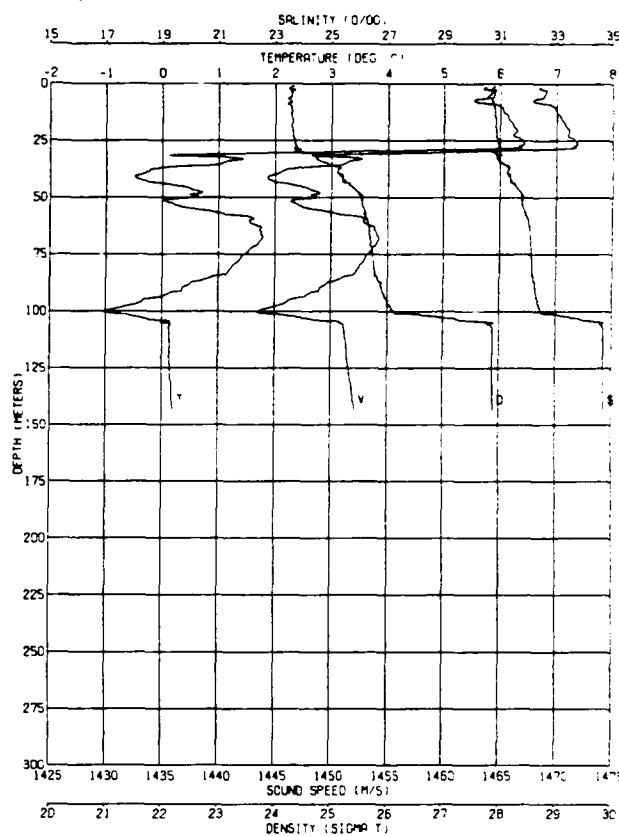
63



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY
 (dBar) (M) (deg C) (mS/cm) (0/00) (N/sec)

6.0	5.9	5.74	30.411	30.789	24.293	1468.4
11.2	11.2	5.85	30.521	30.822	24.288	1469.0
16.3	16.2	6.02	30.700	30.859	24.308	1469.8
21.3	21.2	6.42	31.139	30.879	24.353	1471.6
26.4	26.2	6.50	31.218	30.885	24.358	1472.0
32.0	31.6	6.85	31.300	31.300	25.101	1449.0
37.7	37.5	0.00	28.194	31.219	25.082	1444.8
43.5	43.3	0.25	26.715	31.845	25.413	1446.4
49.0	48.7	-0.02	26.577	31.738	25.500	1445.4
54.2	53.8	1.00	27.518	31.800	25.579	1450.4
60.4	60.0	0.87	27.551	31.870	25.837	1450.4
66.6	66.2	1.72	28.238	32.072	25.872	1454.0
72.8	72.4	1.50	28.110	32.130	25.733	1453.2
78.9	78.4	1.30	27.883	32.150	25.782	1452.4
84.2	83.7	1.00	27.710	32.130	25.783	1451.2
89.2	89.7	0.40	27.342	32.240	25.818	1449.7
95.5	94.8	-0.27	26.878	32.371	26.020	1445.8
102.0	101.4	-0.41	27.789	32.734	27.125	1447.1
107.3	106.8	0.10	28.867	34.728	27.800	1450.8
112.4	111.8	0.10	28.875	34.735	27.807	1451.0
117.5	116.7	0.11	28.886	34.740	27.812	1451.1
122.4	121.8	0.11	28.888	34.744	27.814	1451.2
123.6	122.8	0.12	28.001	34.744	27.814	1451.2
123.6	122.8	0.11	28.895	34.742	27.812	1451.2
123.6	122.7	0.12	28.007	34.747	27.816	1451.2
123.7	122.8	0.13	28.014	34.750	27.819	1451.3
120.8	120.0	0.11	28.000	34.747	27.817	1451.2
115.8	115.0	0.10	28.882	34.742	27.813	1451.0
110.8	110.1	0.10	28.878	34.740	27.812	1450.9
105.9	105.2	0.11	28.880	34.738	27.809	1450.8
100.3	99.7	-0.87	28.498	32.497	26.144	1443.3
94.8	94.2	0.03	27.119	32.371	26.007	1447.2
89.8	89.2	0.83	27.518	32.287	25.894	1449.7
83.8	83.3	1.14	27.881	32.182	25.787	1451.8
77.8	77.3	1.33	27.989	32.182	25.789	1452.8
71.8	71.5	1.58	28.213	32.170	25.759	1453.8
66.7	66.3	1.78	28.292	32.077	25.671	1454.3
60.8	60.3	1.42	27.884	31.938	25.583	1452.4
54.4	54.0	0.70	27.200	31.808	25.521	1448.9
49.1	48.9	0.03	26.898	31.851	25.589	1445.8
43.8	43.5	0.43	26.858	31.845	25.405	1447.3
38.5	38.3	-0.50	25.917	31.373	25.225	1442.5
33.3	33.1	1.13	27.184	31.334	25.119	1449.9
27.5	27.3	0.28	31.210	31.204	24.950	1471.4
21.2	21.1	0.24	30.899	30.884	24.301	1470.8
14.8	14.5	0.08	30.742	30.852	24.284	1470.0
9.1	9.0	0.03	30.881	30.833	24.285	1469.7
3.9	3.8	5.81	30.561	30.817	24.287	1469.1

64

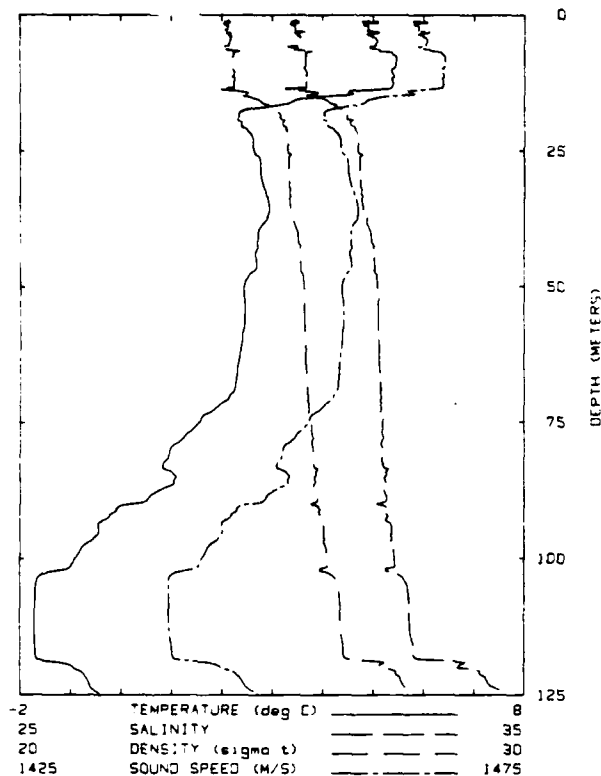


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.5	5.78	1468.8	24.28	30.77
10.1	6.02	1469.7	24.28	30.79
15.1	6.14	1470.4	24.30	30.84
20.6	6.30	1471.1	24.31	30.87
25.4	6.41	1471.7	24.36	30.94
30.3	2.55	1458.7	24.63	30.91
35.3	1.06	1451.2	24.93	31.12
40.3	-0.43	1444.6	25.14	31.29
45.3	-0.40	1447.6	25.37	31.60
50.0	.47	1448.3	25.52	31.79
55.2	.60	1448.5	25.68	31.87
60.3	1.55	1452.8	25.64	32.01
65.3	1.77	1454.0	25.67	32.06
70.2	1.70	1454.0	25.70	32.09
75.3	1.44	1453.2	25.73	32.11
80.1	1.24	1452.4	25.75	32.13
85.1	.86	1451.1	25.81	32.18
91.3	.33	1449.0	25.91	32.27
95.3	-0.34	1446.3	26.01	32.36
100.2	-0.97	1443.6	26.12	32.47
110.1	.12	1451.2	27.88	34.71
120.0	.13	1451.5	27.88	34.71
130.0	.15	1451.7	27.89	34.71
140.1	.17	1452.0	27.89	34.72
143.9	.18	1452.1	27.89	34.72

Station Number 65 66 ASL Cast X APL Cast X Julian Day 245 GMT hhmm 1659 Platform Ship Latitude 71 32.5 Longitude 156 36.9

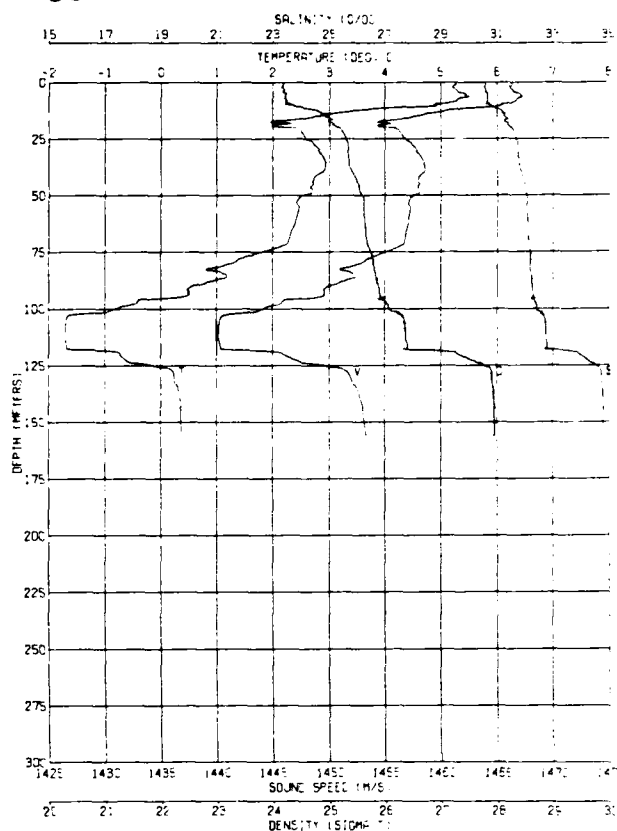
65



DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (ms/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

1.2	1.2	4.84	29.366	30.489	24.130	1464.2
2.1	2.1	4.88	29.368	30.434	24.089	1464.4
6.0	5.8	4.93	29.327	30.311	23.986	1464.5
11.0	10.9	5.40	30.027	30.882	24.239	1466.9
15.8	15.8	3.44	28.807	31.089	24.783	1459.4
20.8	20.8	2.45	28.488	31.850	25.283	1455.9
25.8	25.7	2.87	28.773	31.801	25.385	1457.2
30.8	30.7	2.80	28.841	31.755	25.339	1457.7
35.8	35.7	2.84	28.003	31.803	25.385	1458.5
40.8	40.8	2.71	28.943	31.857	25.508	1457.8
45.8	45.8	2.68	28.982	32.025	25.583	1457.9
50.8	50.5	2.42	28.819	32.080	25.635	1456.8
55.8	55.8	2.45	28.848	32.087	25.639	1457.1
60.8	60.8	2.38	28.808	32.114	25.658	1456.9
65.0	65.8	2.30	28.763	32.138	25.684	1456.6
71.1	70.7	2.12	28.837	32.158	25.712	1456.0
76.1	75.6	1.48	28.152	32.189	25.781	1453.3
81.2	80.7	0.85	27.716	32.194	25.818	1450.9
86.3	85.7	1.05	27.838	32.246	25.854	1451.5
91.4	90.8	-0.06	26.853	32.275	25.835	1448.5
96.4	95.8	-0.48	26.695	32.361	26.021	1444.8
102.8	102.8	-1.05	26.166	32.248	25.949	1442.1
108.9	108.2	-1.71	25.883	32.723	26.350	1439.7
115.3	114.5	-1.71	26.026	32.770	26.387	1439.9
121.7	120.8	-0.76	27.783	34.118	27.451	1446.3
127.2	126.3	-0.05	26.835	34.847	28.006	1450.6
132.3	131.4	0.25	28.188	34.805	27.956	1452.1
133.8	133.0	0.28	28.206	34.820	27.968	1452.2
134.0	133.0	0.28	28.210	34.822	27.968	1452.3
133.9	133.0	0.28	28.218	34.828	27.972	1452.3
133.9	133.0	0.28	28.218	34.828	27.972	1452.3
133.8	133.0	0.28	28.216	34.828	27.973	1452.3
131.4	130.5	0.20	28.114	34.782	27.948	1451.8
127.1	126.3	0.02	28.886	34.705	27.888	1450.8
122.5	121.8	-0.88	27.878	34.181	27.482	1446.7
118.3	115.8	-1.70	26.045	32.787	26.401	1440.0
110.5	108.8	-1.71	26.000	32.736	26.380	1439.8
104.3	103.8	-1.88	25.983	32.683	26.301	1439.7
98.1	97.4	-0.58	26.872	32.427	26.079	1444.5
92.8	92.2	0.30	27.288	32.329	25.862	1448.3
87.8	87.3	0.72	27.588	32.281	25.801	1450.1
82.8	82.3	0.84	27.830	32.183	25.824	1450.5
77.7	77.2	1.31	28.080	32.288	25.854	1452.8
72.5	72.1	1.88	28.587	32.220	25.772	1455.4
67.4	67.0	2.19	28.784	32.147	25.881	1458.8
62.3	62.0	2.34	28.784	32.135	25.877	1458.8
57.2	56.8	2.43	28.843	32.112	25.853	1457.0
52.1	51.8	2.43	28.835	32.108	25.849	1456.9
47.1	46.8	2.58	28.958	32.088	25.827	1457.5
41.9	41.7	2.68	28.946	31.883	25.528	1457.7
36.8	36.7	2.80	28.024	31.872	25.423	1458.4
31.8	31.7	2.85	28.880	31.758	25.337	1458.0
26.7	26.6	2.70	28.738	31.728	25.323	1457.2
21.6	21.5	2.33	28.284	31.540	25.204	1455.3
16.5	16.5	2.78	28.482	31.345	25.012	1458.9
11.5	11.4	3.38	28.857	31.304	24.838	1458.8
6.5	6.4	5.38	30.054	30.721	24.271	1468.9
1.7	1.7	8.38	28.832	30.488	24.088	1466.4

66

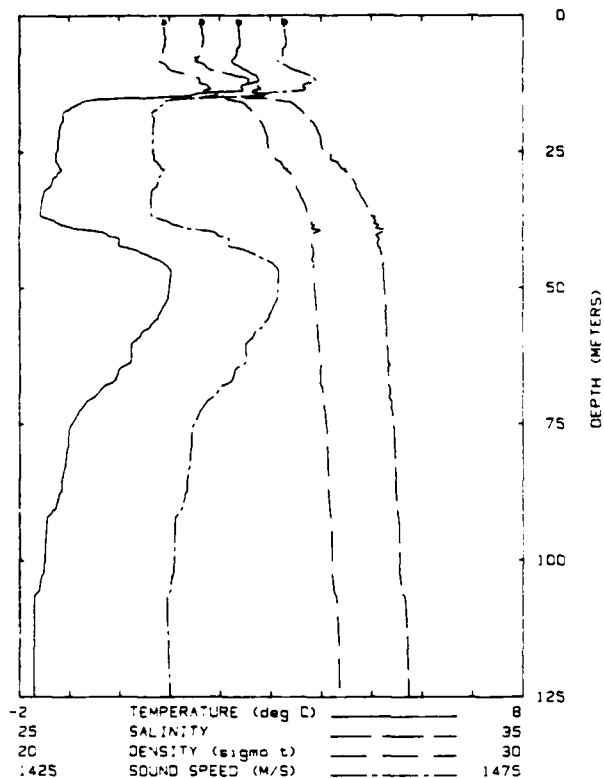


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	5.45	1467.0	24.22	30.64
10.1	4.94	1465.5	24.37	30.76
15.1	2.75	1457.8	24.86	31.17
20.3	2.41	1456.1	25.13	31.46
25.1	2.59	1456.9	25.26	31.63
30.3	2.82	1457.9	25.32	31.73
35.1	2.93	1458.5	25.35	31.78
40.2	2.85	1458.4	25.42	31.86
45.3	2.71	1458.1	25.52	31.97
50.3	2.51	1457.5	25.61	32.06
55.4	2.46	1457.3	25.62	32.07
60.1	2.41	1457.2	25.63	32.08
65.1	2.34	1457.0	25.65	32.10
70.3	2.27	1456.8	25.67	32.12
75.3	1.78	1455.0	25.74	32.17
80.1	1.27	1453.0	25.77	32.16
85.0	1.18	1452.4	25.82	32.21
90.1	.56	1450.0	25.84	32.20
95.3	.26	1448.8	25.92	32.28
100.1	-.82	1444.4	26.06	32.40
110.2	-1.70	1440.3	26.36	32.74
120.3	-1.73	1446.0	27.32	33.96
130.1	-.24	1451.8	27.95	34.79
140.1	.35	1452.8	27.96	34.82
150.2	.37	1453.2	27.96	34.81
156.3	.37	1453.3	27.95	34.81

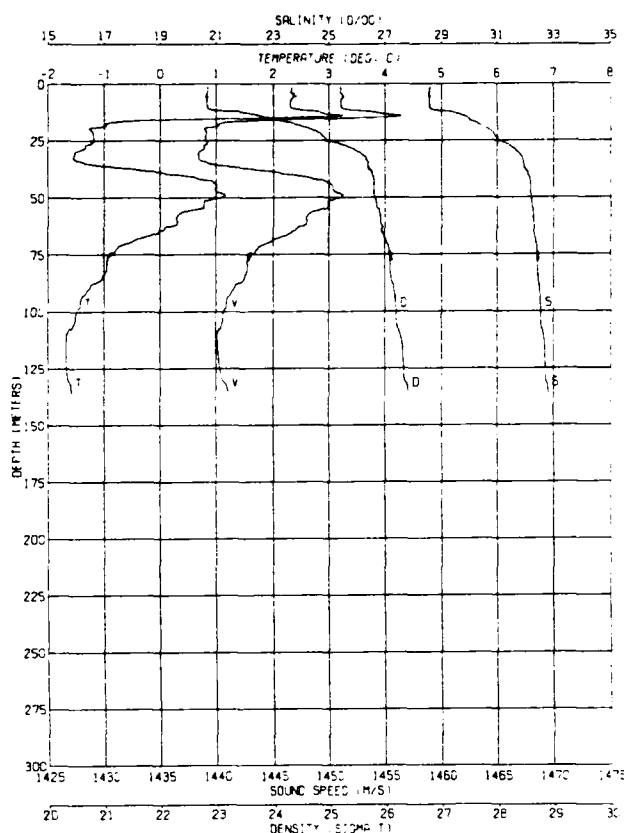
Station Number 67 68
 ASL Cast X
 APL Cast X
 Julian Day 245
 GMT hhmm 1831
 Platform Ship
 Latitude 71 36.7
 Longitude 156 8.3

67



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
1.2	1.2	2.42	28.003	28.885	22.922	1451.6
1.0	1.0	2.38	25.881	28.885	22.928	1451.3
2.5	2.5	2.37	25.838	28.847	22.895	1451.4
6.7	6.7	2.33	25.874	28.800	22.860	1451.2
13.2	13.2	2.41	28.886	28.785	22.783	1453.2
19.7	19.6	-1.15	25.008	30.636	24.810	1438.4
25.3	25.2	-1.28	25.122	31.102	25.028	1438.3
30.8	30.4	-1.34	25.488	31.853	25.478	1438.8
36.0	35.8	-1.58	25.480	31.938	25.710	1438.1
41.0	40.8	-0.08	28.814	32.121	25.811	1445.5
45.8	45.8	0.80	27.700	32.247	25.863	1450.2
50.8	50.3	0.87	27.771	32.258	25.888	1450.7
55.3	55.0	0.77	27.834	32.288	25.904	1449.8
60.0	59.7	0.32	27.888	32.302	25.938	1447.9
64.7	64.4	0.08	27.138	32.354	25.991	1447.0
69.6	69.2	-0.42	28.742	32.372	26.027	1444.7
75.5	75.0	-0.95	28.380	32.444	26.104	1442.4
81.4	80.9	-1.06	28.314	32.474	26.132	1442.0
87.2	86.7	-1.15	28.285	32.495	26.151	1441.8
93.1	92.5	-1.44	28.077	32.554	26.207	1440.5
98.8	98.1	-1.48	28.055	32.588	26.217	1440.4
104.8	103.8	-1.57	28.010	32.595	26.243	1440.2
110.3	109.5	-1.70	25.885	32.700	26.331	1439.8
115.9	115.1	-1.70	26.008	32.730	26.358	1439.9
121.4	120.8	-1.70	26.017	32.745	26.387	1440.0
126.8	126.0	-1.70	26.028	32.750	26.372	1440.1
132.3	131.3	-1.88	26.088	32.788	26.402	1440.4
137.8	136.7	-1.83	26.142	32.828	26.434	1440.7
137.8	138.8	-1.84	26.138	32.828	26.433	1440.7

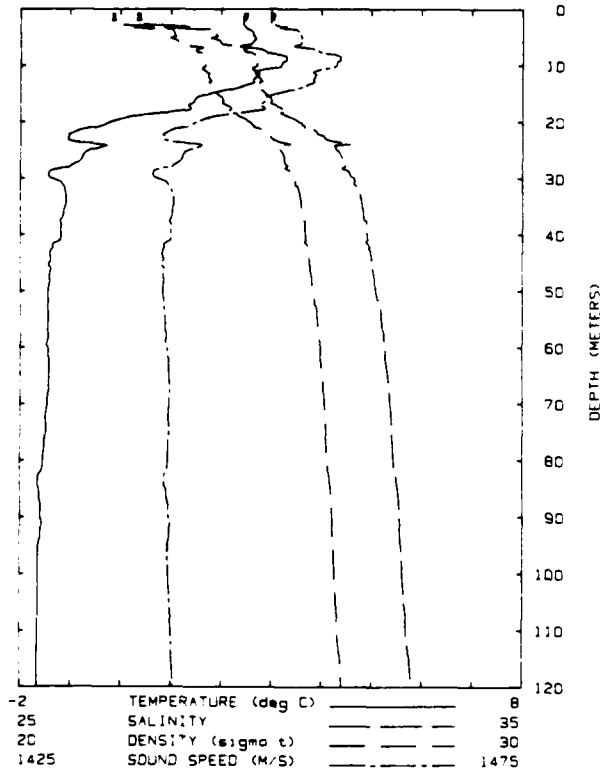
68



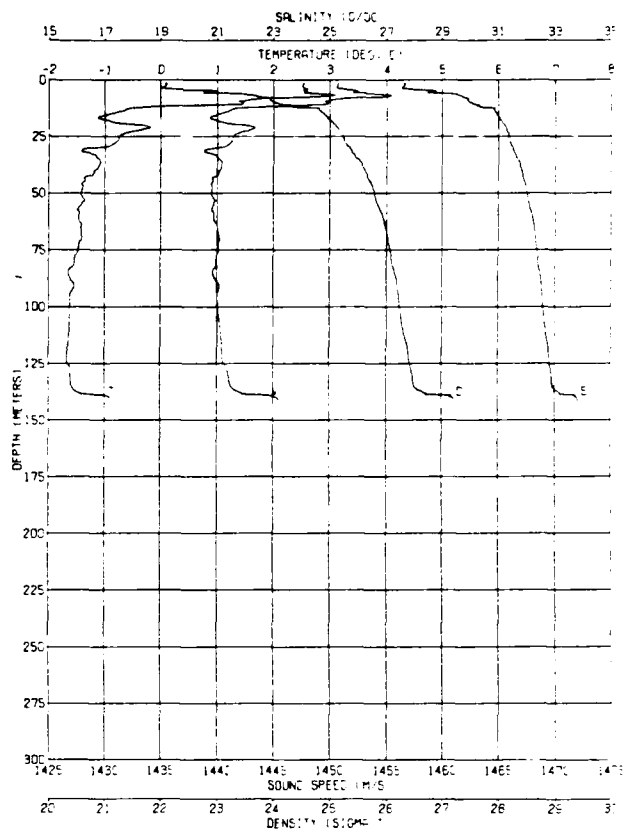
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	2.36	1451.2	22.83	28.56
10.1	2.30	1451.1	22.84	28.56
15.3	2.16	1453.0	23.74	29.70
20.1	-1.28	1439.2	24.64	30.62
25.2	-1.18	1439.4	24.95	31.01
30.1	-1.51	1438.7	25.48	31.66
35.0	-1.34	1439.4	25.68	31.90
40.2	.39	1446.9	25.82	32.15
45.0	1.01	1450.2	25.85	32.22
50.0	1.08	1451.0	25.84	32.23
55.2	.63	1449.5	25.89	32.26
60.2	.31	1448.1	25.91	32.27
65.2	-.03	1446.7	25.94	32.29
70.2	-.57	1444.5	26.02	32.36
75.0	-.85	1443.3	26.06	32.40
80.2	-.95	1442.7	26.09	32.42
85.0	-1.03	1442.5	26.11	32.44
90.1	-1.28	1441.5	26.14	32.48
95.1	-1.43	1440.9	26.17	32.51
100.4	-1.50	1440.7	26.20	32.54
110.2	-1.68	1440.1	26.28	32.63
120.0	-1.69	1440.2	26.32	32.68
130.1	-1.66	1440.5	26.35	32.72
135.9	-1.59	1441.0	26.41	32.80

Station Number 69 70 ASL Cast X APL Cast X Julian Day 245 GMT hhmm 2000 Platform Ship Latitude 71 41.3 Longitude 155 35.9

69



70



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY

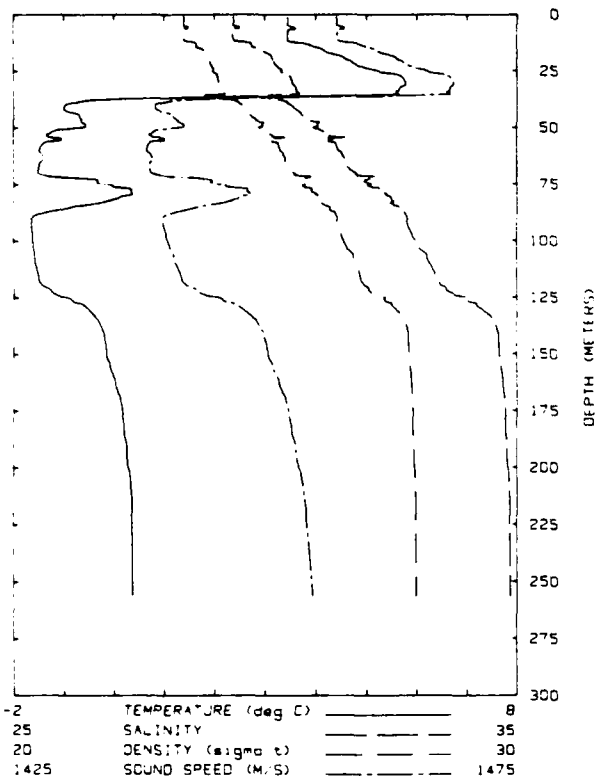
2.0	2.0	2.48	24.957	27.364	21.066	1450.2
1.7	1.7	2.45	24.920	27.340	21.055	1450.0
5.0	5.0	2.66	26.377	28.913	23.007	1453.0
9.6	9.6	3.20	27.455	29.710	23.600	1456.5
14.0	14.7	1.92	28.576	29.036	23.073	1451.1
19.7	19.6	-0.02	25.595	30.474	24.484	1443.2
24.6	24.5	-0.37	25.937	31.271	25.138	1442.0
29.4	29.3	-1.43	25.336	31.566	25.407	1438.2
34.4	34.2	-1.00	25.765	31.804	25.592	1440.3
39.3	39.1	-1.19	25.769	31.890	25.670	1440.0
44.2	44.0	-1.40	25.690	32.005	25.761	1439.2
49.6	49.3	-1.43	25.715	32.077	25.811	1439.2
55.7	55.3	-1.45	25.797	32.200	25.920	1439.4
61.7	61.3	-1.44	25.856	32.270	25.977	1439.6
67.0	67.4	-1.42	25.922	32.353	26.044	1439.9
74.0	73.5	-1.49	25.923	32.407	26.069	1439.9
79.9	79.4	-1.54	25.914	32.445	26.121	1439.7
86.0	85.5	-1.61	25.921	32.535	26.195	1439.6
92.2	91.6	-1.56	25.993	32.575	26.227	1440.0
96.4	97.0	-1.64	25.969	32.616	26.262	1439.0
104.4	103.7	-1.64	25.997	32.651	26.290	1439.9
110.5	109.7	-1.64	26.030	32.704	26.333	1440.1
116.6	115.0	-1.66	26.073	32.773	26.389	1440.2
120.8	119.9	-1.66	26.092	32.796	26.400	1440.3
127.7	121.0	-1.66	26.112	32.826	26.432	1440.3
122.7	121.9	-1.66	26.119	32.836	26.440	1440.3
122.0	122.0	-1.66	26.117	32.836	26.440	1440.3

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	2.58	1452.5	23.01	28.80
10.3	1.46	1449.8	24.08	30.06
15.0	-0.91	1440.4	24.84	30.88
20.4	-2.27	1443.0	25.09	31.21
25.4	-1.75	1441.4	25.23	31.36
30.1	-1.14	1440.1	25.28	31.42
35.1	-1.10	1440.3	25.52	31.68
40.2	-1.18	1440.2	25.61	31.83
45.1	-1.35	1439.7	25.71	31.94
50.2	-1.42	1439.5	25.77	32.01
55.3	-1.42	1439.7	25.84	32.09
60.1	-1.45	1439.7	25.92	32.22
65.2	-1.42	1440.0	25.98	32.27
70.2	-1.41	1440.2	26.02	32.33
75.3	-1.47	1440.1	26.06	32.38
80.5	-1.53	1440.0	26.10	32.42
85.3	-1.64	1439.6	26.15	32.47
90.1	-1.54	1440.2	26.19	32.53
95.3	-1.62	1440.0	26.22	32.57
100.1	-1.62	1440.1	26.25	32.60
110.1	-1.63	1440.3	26.30	32.67
120.1	-1.67	1440.5	26.40	32.79
130.3	-1.61	1441.0	26.48	32.89
140.3	-1.90	1445.4	27.21	33.81
142.3	-1.91	1445.6	27.25	33.86

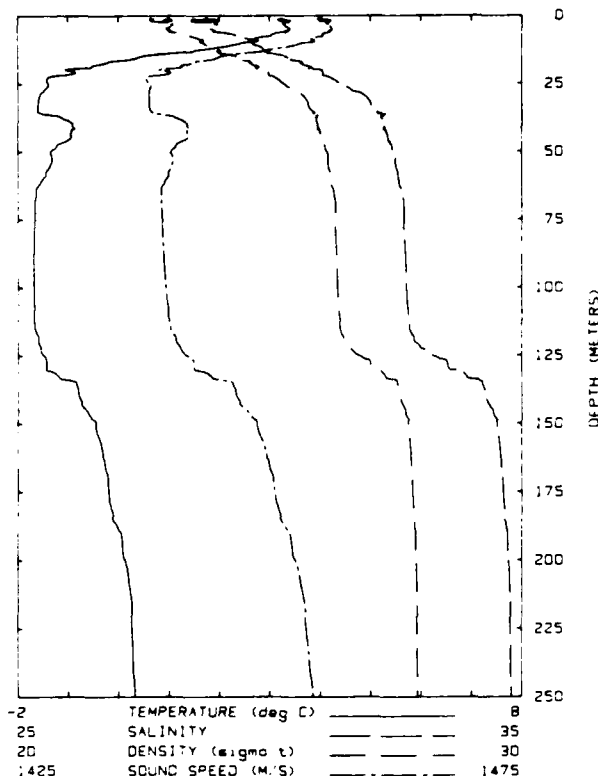
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
71	X		245	2121	Ship	71 44.4	155 8.5
72	X		245	2351	Ship	71 55.6	155 1.3

71



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
6.6	6.6	3.81	27.472	28.383	23.371	1457.7
15.9	15.9	4.18	28.416	28.660	23.784	1461.0
25.2	25.1	5.24	29.589	30.328	23.978	1466.1
34.1	33.8	5.84	30.175	30.815	24.159	1468.2
43.3	43.1	-0.80	25.087	30.888	24.883	1438.8
52.5	52.2	-1.25	25.183	31.187	25.080	1438.9
62.0	61.6	-1.44	25.305	31.515	25.288	1438.8
72.2	71.7	-1.27	25.845	32.188	25.815	1440.5
81.4	80.9	-0.10	27.258	32.487	28.098	1447.5
90.8	90.3	-1.84	28.107	32.618	28.423	1439.9
100.3	99.8	-1.82	28.242	32.978	28.553	1440.4
110.1	109.4	-1.57	28.482	33.244	28.789	1441.1
119.3	118.5	-1.48	28.704	33.443	28.928	1442.0
128.8	127.7	-0.87	27.835	34.204	27.518	1447.0
137.6	136.7	-0.27	28.550	34.578	27.708	1448.4
146.6	145.5	-0.18	28.704	34.848	27.849	1450.2
155.5	154.4	-0.08	28.808	34.884	27.878	1450.8
163.8	162.4	0.03	28.828	34.721	27.900	1451.4
171.4	170.1	0.13	29.045	34.753	27.920	1452.1
178.8	177.5	0.19	29.108	34.772	27.933	1452.5
186.1	184.7	0.22	29.148	34.784	27.940	1452.8
193.1	191.8	0.27	29.211	34.808	27.955	1453.1
200.5	198.9	0.28	29.237	34.815	27.961	1453.3
207.7	206.1	0.34	29.307	34.840	27.978	1453.7
215.7	214.0	0.37	29.339	34.850	27.985	1454.0
222.5	220.8	0.37	29.348	34.855	27.989	1454.1
230.2	228.4	0.37	29.360	34.881	27.993	1454.3
238.3	236.3	0.38	29.370	34.883	27.995	1454.4
246.4	244.4	0.38	29.375	34.885	27.997	1454.6
254.9	252.7	0.38	29.381	34.888	27.999	1454.7

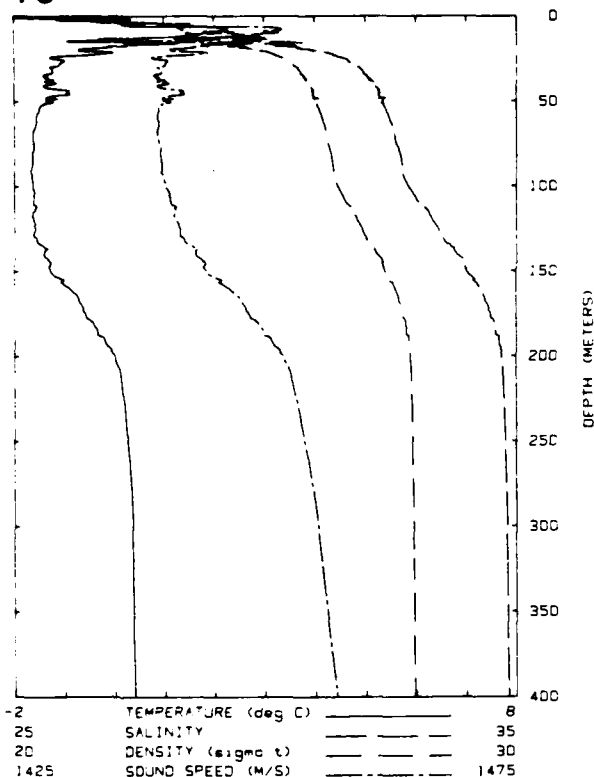
72



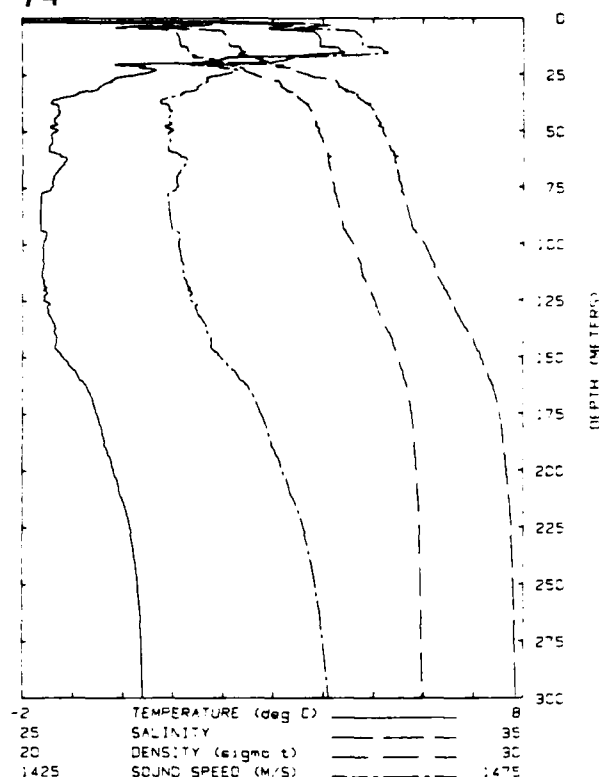
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.2	3.2	3.25	26.678	28.880	23.095	1455.7
10.7	10.6	2.38	28.787	29.875	23.713	1452.9
18.9	18.8	-0.06	25.622	30.545	24.542	1443.1
22.3	22.1	-1.19	25.164	31.082	24.994	1438.8
27.8	27.5	-1.47	25.338	31.808	25.442	1438.1
32.8	32.7	-1.80	25.528	32.004	25.785	1440.6
37.8	37.8	-1.14	26.051	32.228	25.935	1440.8
43.0	42.8	-0.92	28.288	32.321	26.003	1441.9
48.6	48.5	-1.23	28.135	32.435	26.105	1440.7
55.0	54.7	-1.34	28.082	32.480	26.153	1440.3
61.5	61.1	-1.54	25.894	32.566	26.218	1439.6
68.1	67.7	-1.85	25.888	32.654	26.282	1439.3
74.1	73.7	-1.86	25.871	32.684	26.301	1439.3
80.8	80.3	-1.87	25.878	32.679	26.313	1439.4
87.2	86.8	-1.88	25.888	32.685	26.328	1439.5
93.5	92.9	-1.88	25.893	32.708	26.338	1439.6
99.9	99.3	-1.88	25.898	32.712	26.340	1439.7
106.0	105.3	-1.88	26.013	32.726	26.352	1439.8
112.2	111.4	-1.89	26.041	32.785	26.383	1439.9
118.5	117.7	-1.80	26.186	32.838	26.441	1440.6
124.7	123.9	-1.53	26.437	33.134	26.878	1441.4
131.0	130.1	-1.44	26.823	33.556	27.018	1442.5
137.3	136.4	-0.82	27.837	34.240	27.551	1448.4
143.6	142.5	-0.74	27.878	34.353	27.623	1447.0
149.8	148.8	-0.48	28.348	34.528	27.768	1448.8
155.9	154.7	-0.39	28.428	34.538	27.774	1448.1
161.1	160.0	-0.31	28.531	34.582	27.805	1448.8
168.9	165.8	-0.28	28.582	34.600	27.817	1450.0
173.2	171.8	-0.20	28.684	34.625	27.835	1450.4
178.1	177.8	-0.18	28.685	34.637	27.843	1450.6
185.1	183.7	-0.11	28.780	34.685	27.862	1451.1
190.4	188.0	0.02	28.823	34.713	27.894	1451.8
195.5	194.0	0.08	28.880	34.721	27.897	1452.2
200.7	199.2	0.11	28.823	34.735	27.907	1452.4
205.9	204.3	0.18	29.107	34.749	27.914	1452.9
211.3	209.7	0.22	29.147	34.784	27.924	1453.1
218.5	214.8	0.26	29.188	34.780	27.935	1453.4
221.5	219.8	0.27	29.207	34.777	27.932	1453.6
227.1	225.3	0.28	29.218	34.782	27.935	1453.7
232.8	230.8	0.28	29.235	34.785	27.937	1453.8
238.1	236.2	0.30	29.238	34.784	27.938	1453.9
243.4	241.4	0.30	29.248	34.785	27.937	1454.1
249.0	247.0	0.33	29.280	34.788	27.944	1454.3
254.3	252.2	0.35	29.308	34.806	27.951	1454.5
258.8	254.5	0.38	29.317	34.808	27.952	1454.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
73	X		246	0109	Ship	72 3.9	154 53.9
74	X		246	0254	Ship	72 13.5	154 48.1

73



74



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ns/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	-0.11	22.072	25.984	20.884	1438.5
4.2	4.2	-0.25	23.408	27.844	22.375	1438.4
8.2	8.1	1.04	25.088	29.188	23.358	1440.8
14.3	14.3	0.39	25.162	29.513	23.894	1443.8
19.8	19.5	-0.59	25.360	30.738	24.718	1440.9
25.1	25.0	-1.25	25.470	31.556	25.395	1439.0
31.5	31.3	-1.25	25.728	31.904	25.678	1439.6
38.1	37.9	-1.20	25.884	32.084	25.804	1440.1
44.3	44.1	-0.88	26.278	32.249	25.844	1442.0
50.4	50.1	-1.24	26.081	32.345	26.033	1440.5
55.8	55.6	-1.50	25.910	32.411	26.092	1439.5
62.2	61.9	-1.55	25.933	32.496	26.153	1439.4
68.4	68.0	-1.83	25.928	32.588	26.223	1439.3
74.8	74.3	-1.82	25.957	32.597	26.246	1439.4
81.1	80.8	-1.84	26.001	32.678	26.312	1439.5
86.7	86.2	-1.84	26.031	32.717	26.343	1439.7
92.9	92.3	-1.86	26.045	32.750	26.371	1439.8
99.3	98.6	-1.82	26.134	32.829	26.434	1440.1
105.7	105.0	-1.81	26.238	32.853	26.534	1440.5
112.0	111.3	-1.59	26.380	33.121	26.669	1440.9
117.4	116.8	-1.64	26.449	33.268	26.790	1441.0
123.5	122.8	-1.59	26.568	33.378	26.877	1441.4
129.7	128.8	-1.62	26.631	33.496	26.974	1441.5
136.2	135.2	-1.44	26.815	33.680	27.119	1442.7
142.4	141.4	-1.41	27.075	33.860	27.263	1443.2
147.8	146.7	-1.28	27.250	33.958	27.339	1444.0
154.0	152.9	-1.20	27.430	34.101	27.452	1444.8
160.3	159.1	-0.85	27.747	34.250	27.564	1446.2
166.7	165.5	-0.75	28.023	34.375	27.657	1447.5
173.4	172.1	-0.84	28.181	34.448	27.708	1448.2
179.8	177.6	-0.57	28.255	34.493	27.745	1448.6
184.5	183.1	-0.40	28.474	34.591	27.816	1449.8
189.8	188.4	-0.29	28.627	34.688	27.874	1450.3
195.1	193.6	-0.17	28.734	34.858	27.859	1450.9
200.6	199.3	-0.01	28.900	34.708	27.891	1451.8
206.3	204.7	0.04	28.980	34.723	27.901	1452.2
211.8	210.2	0.11	29.030	34.735	27.907	1452.6
217.7	216.0	0.13	29.058	34.743	27.912	1452.8
223.4	221.8	0.15	29.081	34.746	27.914	1453.0
229.4	227.6	0.19	29.123	34.758	27.921	1453.3
235.6	233.9	0.21	29.150	34.765	27.925	1453.5
242.2	240.3	0.22	29.184	34.786	27.928	1453.6
248.3	246.3	0.25	29.182	34.775	27.931	1453.8
254.7	252.6	0.27	29.225	34.783	27.937	1454.1
261.3	259.1	0.28	29.248	34.788	27.940	1454.3
267.7	265.5	0.31	29.273	34.794	27.944	1454.5
274.4	272.0	0.32	29.291	34.798	27.947	1454.7
281.1	278.7	0.34	29.311	34.804	27.950	1454.8
287.7	285.2	0.35	29.323	34.807	27.952	1455.0
294.5	292.0	0.38	29.338	34.810	27.954	1455.2
301.0	298.4	0.38	29.348	34.814	27.956	1455.3
306.8	304.1	0.38	29.351	34.815	27.957	1455.4
312.7	309.9	0.37	29.358	34.816	27.958	1455.5

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ns/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	2.07	23.818	26.334	21.070	1447.0
4.1	4.1	3.18	25.686	27.830	22.029	1453.6
9.5	9.5	3.95	27.510	29.103	23.135	1458.9
14.7	14.7	4.34	28.048	29.372	23.312	1461.0
19.5	19.4	1.68	28.417	29.861	23.907	1450.2
24.4	24.2	0.52	28.089	30.548	24.520	1445.9
29.3	29.1	-0.37	25.959	31.293	25.156	1442.8
34.1	34.0	-0.82	25.788	31.649	25.461	1440.9
39.1	38.9	-1.27	25.733	31.935	25.702	1439.6
44.1	43.8	-1.31	25.788	32.052	25.787	1439.7
49.3	49.0	-1.37	25.851	32.193	25.813	1439.7
54.2	53.9	-1.40	25.887	32.279	25.983	1439.7
59.1	58.8	-1.49	25.884	32.381	26.051	1439.5
64.2	63.8	-1.17	26.178	32.415	26.087	1441.2
69.2	68.8	-1.35	26.083	32.475	26.141	1440.5
74.5	74.0	-1.38	26.119	32.561	26.211	1440.5
79.5	79.0	-1.63	25.981	32.611	26.258	1439.5
84.6	84.1	-1.64	26.005	32.679	26.313	1439.5
89.6	89.0	-1.85	26.039	32.733	26.358	1439.7
94.6	94.0	-1.84	26.109	32.813	26.421	1440.0
99.6	99.0	-1.58	26.279	32.884	26.558	1440.5
104.6	103.9	-1.59	26.350	33.094	26.647	1440.7
109.6	108.9	-1.58	26.442	33.204	26.737	1441.0
114.6	113.8	-1.61	26.470	33.267	26.788	1441.0
119.7	118.9	-1.55	26.630	33.420	26.910	1441.6
124.7	123.9	-1.54	26.728	33.537	27.005	1441.9
129.8	128.9	-1.48	26.850	33.648	27.094	1442.4
134.9	134.0	-1.40	27.008	33.781	27.183	1443.0
139.9	138.8	-1.38	27.132	33.904	27.288	1443.4
144.8	143.8	-1.34	27.263	34.013	27.386	1443.8
149.8	148.5	-1.24	27.412	34.130	27.477	1444.5
154.4	153.3	-1.08	27.606	34.207	27.534	1445.5
159.4	158.3	-0.80	27.835	34.309	27.609	1446.5
164.4	163.2	-0.72	28.058	34.402	27.678	1447.6
169.4	168.1	-0.62	28.180	34.485	27.724	1448.2
174.2	172.8	-0.55	28.278	34.508	27.754	1448.6
179.8	177.6	-0.48	28.384	34.542	27.780	1449.1
183.8	182.5	-0.42	28.445	34.575	27.804	1449.5
188.6	187.2	-0.37	28.500	34.592	27.816	1449.8
193.4	191.9	-0.30	28.587	34.621	27.836	1450.3
198.3	196.7	-0.22	28.681	34.650	27.855	1450.8
203.2	201.6	-0.17	28.737	34.688	27.867	1451.1
208.1	206.5	-0.09	28.827	34.692	27.883	1451.6
213.0	211.3	-0.04	28.878	34.704	27.890	1451.8
217.9	216.1	0.05	28.973	34.728	27.904	1452.4
222.7	221.0	0.11	29.042	34.747	27.916	1452.8
227.7	225.8	0.16	29.085	34.780	27.925	1453.1
232.8	230.9	0.19	29.130	34.788	27.928	1453.3
237.8	236.0	0.23	29.171	34.774	27.932	1453.6

Station Number 75 76 ASL Cast X APL Cast X Julian Day 246 GMT hhmm 0531 Platform Ship Latitude 72 4.1 Longitude 155 36.6

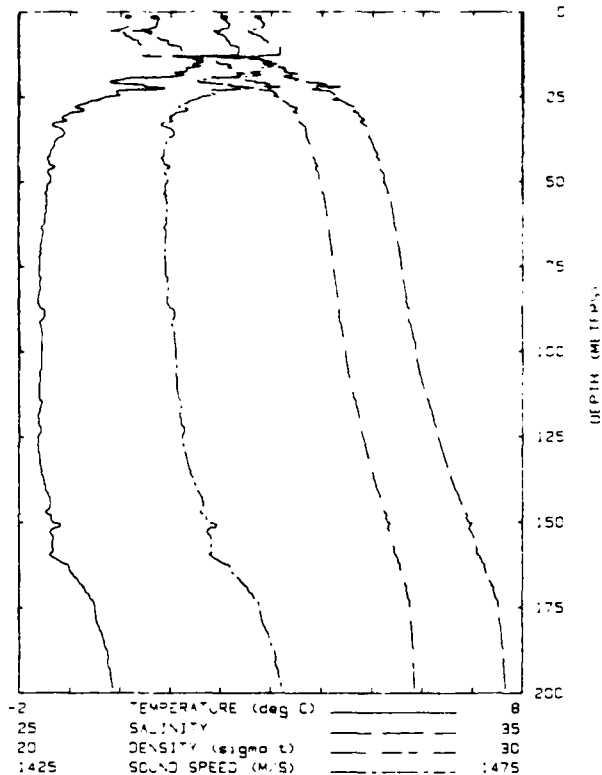
75



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	2.01	1448.1	22.12	27.63
10.3	2.23	1449.9	22.39	28.00
15.3	1.45	1449.5	24.00	29.96
20.9	-1.16	1444.4	24.83	30.91
25.2	-1.67	1442.5	25.13	31.25
30.2	-1.16	1440.6	25.44	31.61
35.1	-1.23	1440.2	25.64	31.86
40.5	-1.35	1439.8	25.77	32.02
45.1	-1.43	1439.7	25.85	32.11
50.0	-1.45	1439.7	25.94	32.22
55.2	-1.47	1439.7	26.01	32.30
60.5	-1.51	1439.7	26.06	32.36
65.1	-1.53	1439.7	26.11	32.43
70.0	-1.60	1439.6	26.17	32.50
75.3	-1.62	1439.6	26.20	32.54
80.1	-1.60	1439.8	26.23	32.58
85.0	-1.63	1439.8	26.27	32.62
90.1	-1.53	1440.4	26.32	32.68
95.2	-1.54	1440.6	26.37	32.76
100.2	-1.56	1440.7	26.43	32.83
110.2	-1.60	1440.9	26.57	33.00
120.0	-1.57	1441.4	26.72	33.18
130.1	-1.57	1441.9	26.91	33.42
140.2	-1.42	1443.1	27.10	33.65
150.2	-1.26	1444.3	27.30	33.91
160.1	-1.29	1444.7	27.42	34.06
170.4	-1.72	1447.7	27.64	34.36
180.0	-1.49	1449.1	27.72	34.46
190.0	-1.30	1450.3	27.78	34.55
200.2	-1.12	1451.4	27.80	34.58
210.2	-1.02	1452.1	27.84	34.64
220.3	-.23	1453.6	27.90	34.74
225.6	.23	1453.6	27.88	34.71

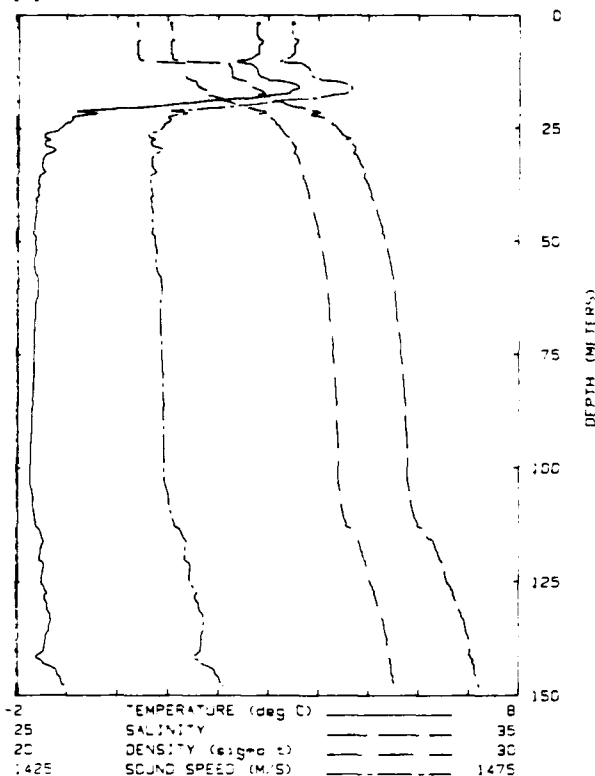
76



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	2.04	24.887	27.639	22.112	1448.6
6.8	6.8	2.01	24.835	27.616	22.095	1448.5
11.8	11.7	2.34	25.558	28.206	22.545	1450.8
16.8	16.7	1.28	26.424	30.261	24.251	1448.8
21.7	21.5	0.24	26.353	31.086	24.968	1445.8
26.6	26.4	-0.83	25.820	31.378	25.234	1441.7
31.5	31.4	-1.17	25.693	31.778	25.573	1439.6
36.4	36.4	-1.14	25.830	31.822	25.688	1440.2
41.5	41.3	-1.40	25.718	32.052	25.799	1439.2
46.4	46.2	-1.35	25.821	32.133	25.864	1439.7
51.4	51.1	-1.46	25.827	32.255	25.965	1439.4
56.4	56.1	-1.47	25.886	32.380	26.050	1439.5
61.3	61.0	-1.52	25.894	32.408	26.091	1439.5
66.3	65.9	-1.55	25.919	32.475	26.145	1439.5
71.3	70.8	-1.80	25.933	32.550	26.207	1439.4
76.1	75.7	-1.82	25.940	32.574	26.227	1439.4
81.0	80.5	-1.81	25.988	32.629	26.271	1439.6
85.9	85.3	-1.84	26.000	32.673	26.308	1439.6
90.8	90.0	-1.53	26.122	32.714	26.338	1440.3
95.4	94.8	-1.56	26.157	32.795	26.404	1440.3
100.0	99.4	-1.58	26.200	32.856	26.454	1440.5
104.8	104.1	-1.58	26.230	32.907	26.496	1440.5
109.8	108.8	-1.59	26.278	32.992	26.565	1440.6
114.8	113.8	-1.80	26.335	33.077	26.634	1440.8
119.8	118.0	-1.84	26.408	33.207	26.740	1440.9
125.4	124.5	-1.82	26.472	33.281	26.800	1441.2
130.9	130.0	-1.59	26.802	33.424	26.915	1441.6
135.2	135.3	-1.56	26.709	33.531	27.001	1442.0
141.2	140.2	-1.48	26.884	33.853	27.098	1442.8
146.5	145.5	-1.39	27.054	33.807	27.220	1443.3
151.9	150.8	-1.18	27.348	32.847	27.328	1444.7
157.3	156.2	-1.34	27.292	34.069	27.430	1444.1
162.6	161.4	-1.19	27.495	34.178	27.514	1445.0
167.8	166.3	-0.88	27.890	34.333	27.628	1446.9
172.7	171.4	-0.58	28.203	34.454	27.714	1448.4
177.4	176.0	-0.48	28.358	34.535	27.775	1449.0
182.0	180.7	-0.41	28.444	34.585	27.798	1449.5
187.0	185.8	-0.30	28.556	34.591	27.812	1450.1
191.8	190.4	-0.23	28.648	34.831	27.841	1450.6
196.8	195.1	-0.17	28.717	34.851	27.854	1450.9
199.8	198.4	-0.14	28.780	34.863	27.882	1451.2

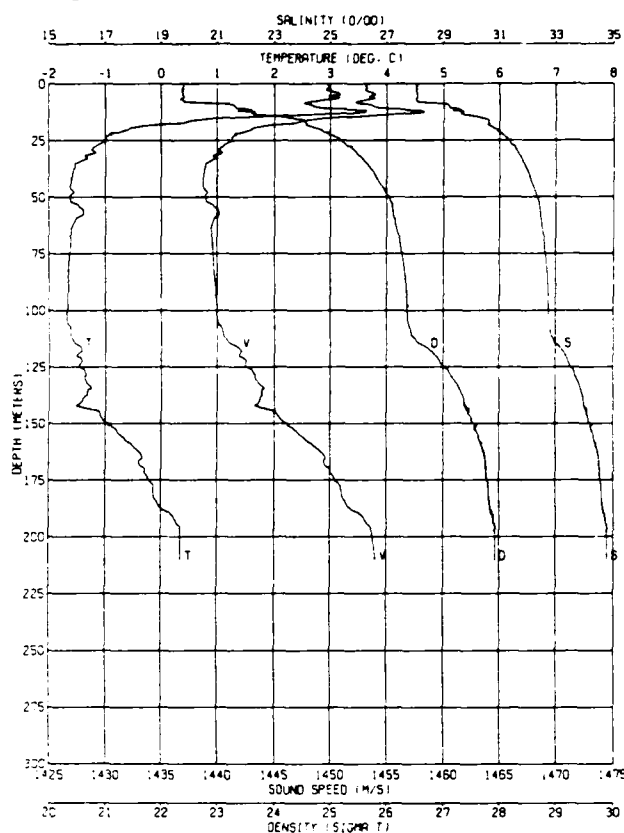
Station Number 77 78 ASL Cast X X APL Cast X X Julian Day 246 GMT hhmm 0650 Platform Ship Latitude 72 1.9 Longitude 155 29.6

77



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.0	2.0	2.83	25.775	28.046	22.385	1452.6
1.7	1.7	2.80	25.764	28.055	22.394	1452.5
6.4	6.4	2.85	25.808	28.060	22.394	1452.8
11.2	11.2	2.70	26.654	28.209	23.319	1453.7
16.2	16.1	3.61	27.777	28.716	23.650	1458.3
21.0	20.8	-0.19	25.898	30.771	24.729	1442.9
26.3	26.1	-1.37	25.306	31.460	25.319	1438.3
31.9	31.8	-1.47	25.467	31.785	25.585	1438.4
35.0	34.8	-1.42	25.608	31.921	25.693	1438.9
35.8	35.7	-1.54	25.508	31.911	25.869	1438.3
39.8	39.6	-1.55	25.601	32.053	25.803	1438.5
44.9	44.6	-1.62	25.853	32.198	25.923	1438.7
50.1	49.8	-1.61	25.781	32.334	26.033	1438.6
55.2	54.9	-1.65	25.813	32.441	26.119	1438.6
60.2	59.8	-1.57	25.936	32.520	26.182	1439.4
65.2	64.8	-1.63	25.924	32.566	26.221	1439.2
70.2	69.7	-1.66	25.939	32.614	26.260	1439.2
75.1	74.6	-1.65	25.976	32.653	26.292	1439.4
80.0	79.5	-1.65	26.012	32.702	26.332	1439.5
84.8	84.3	-1.68	26.008	32.726	26.352	1439.5
89.7	89.1	-1.69	26.021	32.754	26.374	1439.6
94.6	94.1	-1.71	26.031	32.781	26.397	1439.6
99.5	98.8	-1.72	26.030	32.790	26.404	1439.6
104.3	103.7	-1.71	26.051	32.807	26.418	1439.8
109.1	108.4	-1.68	26.136	32.868	26.466	1440.2
114.0	113.2	-1.56	26.387	33.100	26.652	1441.0
118.8	118.0	-1.51	26.818	33.363	26.883	1441.7
123.7	122.8	-1.48	26.770	33.529	26.987	1442.2
128.7	127.8	-1.40	26.860	33.701	27.134	1442.8
133.3	132.4	-1.31	27.154	33.862	27.282	1443.6
138.1	137.1	-1.41	27.170	33.899	27.376	1443.3
142.9	141.8	-1.57	27.098	34.083	27.449	1442.8
147.7	146.6	-1.10	27.558	34.188	27.503	1445.2
148.7	147.6	-1.04	27.647	34.222	27.544	1445.6

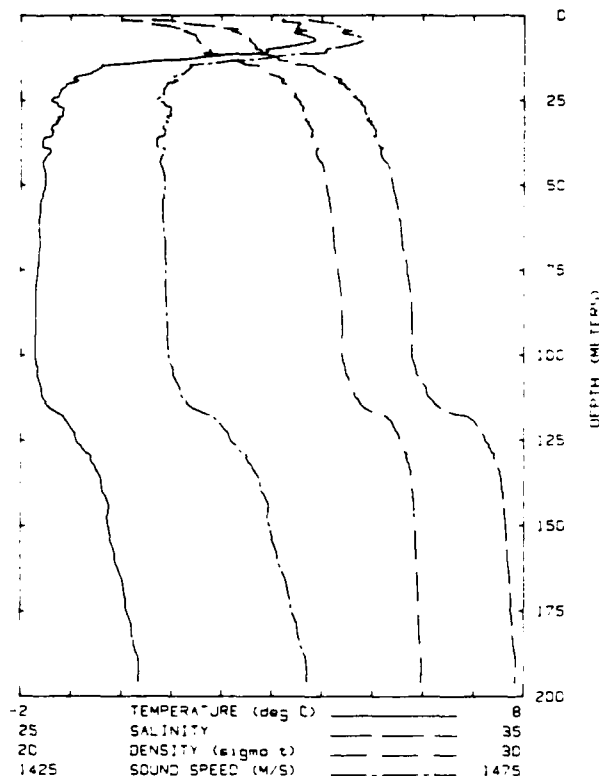
78



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	3.12	1453.9	22.39	28.07
10.4	2.78	1454.1	23.32	29.21
15.1	-.96	1449.5	24.33	30.36
20.3	-.59	1442.9	24.84	30.90
25.1	-.98	1441.3	25.21	31.34
30.3	-1.17	1440.4	25.47	31.65
35.3	-1.55	1438.9	25.64	31.86
40.3	-1.60	1438.8	25.80	32.05
45.0	-1.63	1438.8	25.93	32.20
50.0	-1.63	1439.0	26.04	32.34
55.2	-1.42	1440.0	26.12	32.44
60.2	-1.55	1439.7	26.15	32.48
65.3	-1.61	1439.5	26.19	32.53
70.2	-1.62	1439.6	26.24	32.59
75.0	-1.64	1439.6	26.27	32.63
80.2	-1.66	1439.7	26.31	32.67
85.3	-1.67	1439.7	26.33	32.70
90.3	-1.66	1439.9	26.35	32.72
95.3	-1.67	1440.0	26.37	32.74
100.2	-1.68	1440.0	26.37	32.75
110.1	-1.63	1440.5	26.44	32.83
120.0	-1.52	1441.9	26.87	33.37
130.4	-1.37	1443.3	27.16	33.75
140.2	-1.43	1443.6	27.37	33.99
150.9	-.95	1446.2	27.62	34.31
160.2	-.49	1448.7	27.71	34.45
170.1	-.29	1450.0	27.77	34.54
180.0	-.14	1451.0	27.82	34.61
190.0	.18	1452.7	27.90	34.73
200.1	.35	1453.8	27.93	34.78
210.1	.35	1454.0	27.93	34.78
210.1	.35	1454.0	27.93	34.78

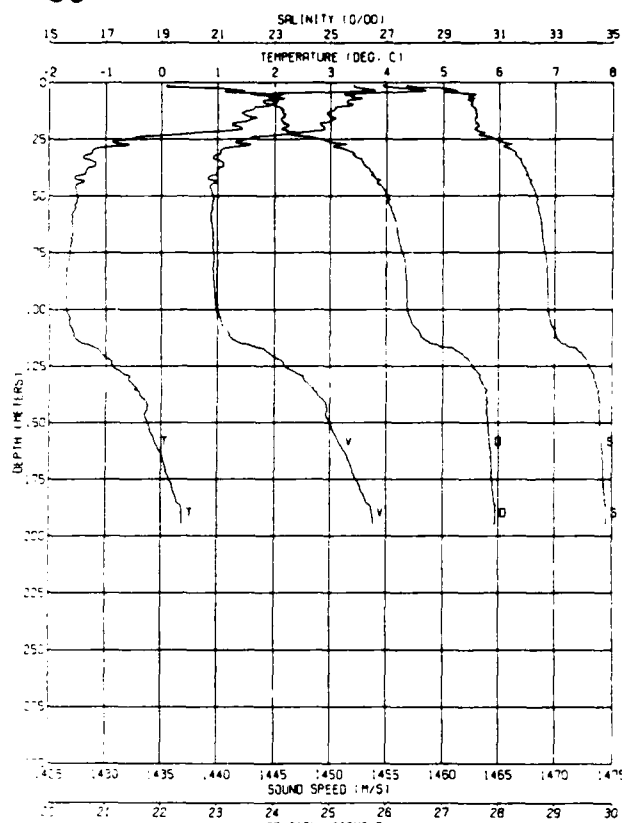
Station Number 79 80 ASL Cast X APL Cast X Julian Day 246 GMT hhmm 0813 Platform Ship Latitude 71 58.1 Longitude 155 26.6

79



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.2	3.2	3.52	26.811	26.667	22.826	1456.4
8.3	8.3	3.70	27.755	26.613	23.581	1458.5
13.7	13.6	0.59	25.904	30.270	24.294	1445.7
18.0	18.9	-0.85	25.557	31.371	25.237	1440.1
24.3	24.2	-1.26	25.484	31.606	25.435	1439.0
28.6	28.5	-1.16	25.770	31.872	25.648	1439.9
35.1	34.9	-1.38	25.757	32.065	25.809	1439.3
40.8	40.5	-1.41	25.787	32.187	25.893	1439.3
46.4	46.1	-1.52	25.838	32.343	26.038	1439.1
51.9	51.8	-1.53	25.885	32.416	26.097	1439.3
57.4	57.1	-1.60	25.896	32.507	26.173	1439.1
62.9	62.6	-1.82	25.926	32.587	26.222	1439.2
68.3	67.9	-1.81	25.956	32.593	26.242	1439.4
73.9	73.4	-1.85	25.988	32.678	26.311	1439.4
79.4	78.9	-1.69	26.000	32.731	26.356	1439.4
84.8	84.3	-1.71	26.018	32.771	26.389	1439.4
90.2	89.7	-1.71	26.023	32.782	26.398	1439.5
95.6	95.0	-1.71	26.026	32.784	26.399	1439.6
101.2	100.5	-1.71	26.037	32.792	26.405	1439.7
106.7	106.0	-1.87	26.143	32.893	26.486	1440.1
112.1	111.3	-1.59	26.346	33.075	26.632	1440.8
117.5	116.7	-1.30	26.499	33.509	26.875	1442.9
122.9	122.1	-0.87	27.421	34.122	27.461	1445.4
128.2	127.3	-0.79	27.919	34.316	27.811	1446.6
133.6	132.7	-0.53	28.258	34.478	27.731	1448.1
139.0	138.1	-0.39	28.446	34.565	27.785	1448.9
144.2	143.2	-0.26	28.591	34.603	27.820	1449.6
149.5	148.4	-0.28	28.589	34.626	27.839	1449.7
154.9	153.7	-0.22	28.657	34.648	27.854	1450.1
160.1	159.0	-0.12	28.780	34.675	27.870	1450.6
165.3	164.1	-0.03	28.889	34.709	27.893	1451.2
170.5	169.2	0.06	28.981	34.730	27.906	1451.7
175.7	174.4	0.10	28.015	34.744	27.914	1452.0
180.9	179.5	0.21	28.133	34.773	27.932	1452.6
186.2	184.8	0.25	28.186	34.794	27.947	1452.9
181.4	180.8	0.35	28.303	34.837	27.976	1453.5
186.7	185.2	0.35	28.311	34.838	27.977	1453.6

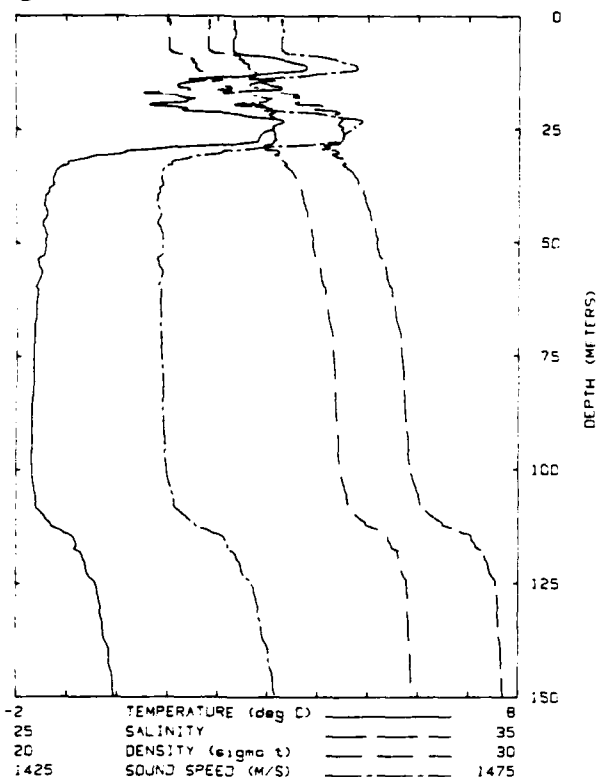
80



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	1.55	1451.2	24.13
10.1	1.90	1451.7	23.99
15.3	1.58	1450.2	24.18
20.5	1.42	1449.5	24.11
25.2	-0.64	1442.4	24.84
30.2	-1.24	1440.2	25.33
35.3	-1.19	1440.5	25.58
40.5	-1.38	1439.9	25.77
45.0	-1.53	1439.4	25.88
50.2	-1.51	1439.6	26.02
55.2	-1.54	1439.6	26.09
60.1	-1.60	1439.5	26.16
65.3	-1.60	1439.6	26.20
70.3	-1.62	1439.6	26.23
75.3	-1.65	1439.7	26.30
80.5	-1.69	1439.6	26.34
85.1	-1.70	1439.7	26.36
90.1	-1.71	1439.7	26.37
95.1	-1.71	1439.8	26.37
100.1	-1.70	1439.9	26.37
110.2	-1.58	1440.9	26.59
120.1	-1.05	1444.8	27.37
130.0	-0.58	1447.6	27.65
140.1	-0.30	1449.4	27.78
150.3	-0.24	1450.0	27.82
160.1	-0.09	1451.0	27.85
170.4	.07	1451.9	27.88
180.4	.22	1452.8	27.90
190.0	.36	1453.7	27.94
194.8	.37	1453.8	27.92

Station Number 81 82 ASL Cast X APL Cast X Julian Day 246 GMT hhmm 0920 Platform Ship Latitude 71 56.7 Longitude 155 23.4

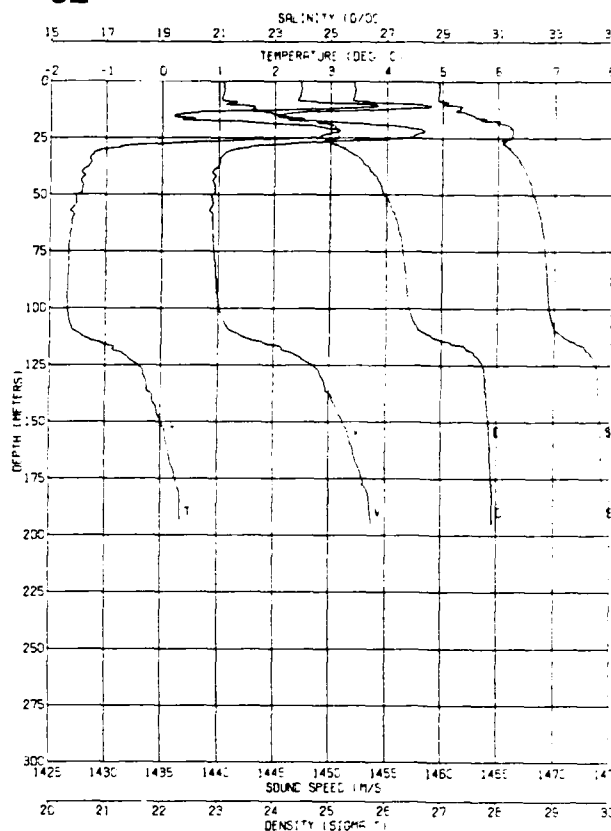
81



PRESSURE (dbar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

2.0	2.0	2.33	28.054	28.824	23.039	1451.4
5.5	5.5	2.31	28.039	28.821	23.038	1451.4
10.8	10.8	3.80	27.871	28.801	23.559	1458.1
15.8	15.8	1.24	28.438	30.317	24.298	1448.7
20.8	20.8	1.28	27.083	31.083	24.908	1450.0
26.0	25.8	2.89	28.706	31.504	25.131	1457.7
31.1	30.9	-0.45	25.953	31.370	25.221	1442.6
37.1	36.9	-1.26	25.834	31.792	25.586	1439.5
43.1	42.9	-1.39	25.708	32.024	25.777	1439.2
48.9	48.6	-1.42	25.792	32.163	25.890	1439.4
54.6	54.3	-1.55	25.804	32.325	26.024	1439.1
60.1	59.8	-1.63	25.836	32.447	26.125	1439.0
65.5	65.1	-1.61	25.926	32.552	26.209	1439.3
70.9	70.5	-1.65	25.967	32.652	26.291	1439.3
76.4	75.9	-1.68	25.993	32.693	26.325	1439.4
81.8	81.3	-1.87	26.018	32.727	26.352	1439.5
87.2	86.7	-1.89	26.028	32.761	26.380	1439.5
92.7	92.1	-1.89	26.051	32.787	26.409	1439.6
98.0	97.4	-1.89	26.079	32.828	26.434	1439.8
103.6	102.9	-1.86	26.170	32.923	26.511	1440.1
109.0	108.2	-1.80	26.318	33.052	26.614	1440.7
114.2	113.4	-1.11	27.278	33.817	27.219	1444.2
119.6	118.8	-0.70	27.987	34.317	27.608	1446.8
124.9	124.0	-0.51	28.299	34.523	27.766	1448.0
130.1	129.2	-0.35	28.478	34.580	27.805	1448.9
135.4	134.5	-0.28	28.584	34.604	27.821	1448.4
140.8	139.7	-0.18	28.701	34.649	27.851	1450.1
145.7	144.7	-0.09	28.781	34.677	27.871	1450.5
151.0	149.9	-0.05	28.839	34.702	27.889	1450.8

82

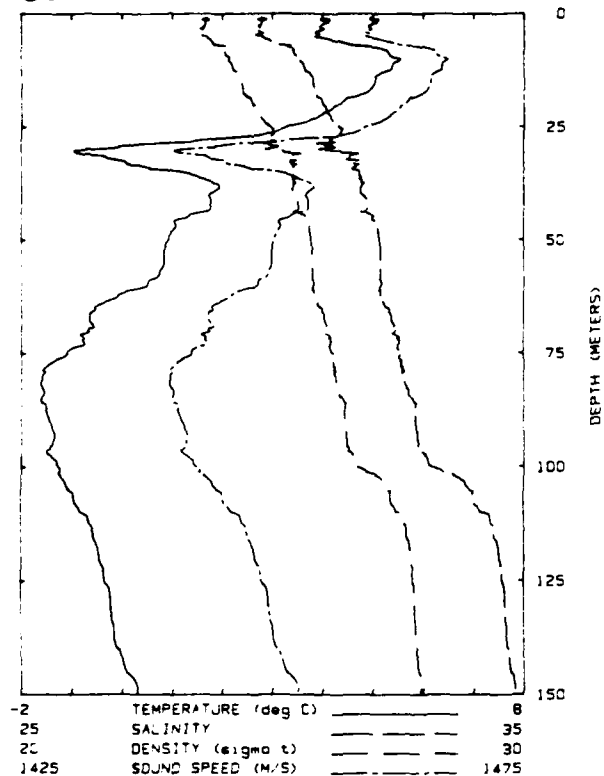


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	2.47	1452.2	23.08	28.88
10.1	3.36	1456.4	23.64	29.64
15.0	.24	1445.6	24.10	30.03
20.3	2.85	1456.9	25.06	31.39
25.1	2.63	1456.6	25.06	31.38
30.1	-1.01	1441.8	25.19	31.32
35.1	-1.27	1440.4	25.49	31.67
40.2	-1.44	1439.7	25.67	31.89
45.1	-1.43	1439.8	25.84	32.10
50.0	-1.52	1439.6	25.91	32.19
55.1	-1.55	1439.5	26.05	32.35
60.2	-1.59	1439.5	26.15	32.47
65.2	-1.62	1439.5	26.20	32.54
70.0	-1.64	1439.6	26.27	32.62
75.4	-1.65	1439.6	26.29	32.65
80.1	-1.66	1439.7	26.32	32.69
85.1	-1.67	1439.8	26.34	32.71
90.1	-1.68	1439.8	26.36	32.73
95.5	-1.68	1440.0	26.40	32.78
100.1	-1.68	1440.1	26.42	32.81
110.2	-1.54	1441.2	26.67	33.12
120.3	-.67	1446.8	27.60	34.31
130.3	-.31	1449.2	27.81	34.58
140.2	-.15	1450.3	27.84	34.63
150.3	.01	1451.3	27.87	34.68
160.1	.11	1452.0	27.89	34.71
170.1	.21	1452.6	27.91	34.74
180.3	.32	1453.4	27.93	34.77
190.4	.34	1453.7	27.93	34.77
195.4	.34	1453.7	27.90	34.74

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
83	X		246	1044	Ship	71 53.5	155 18.8
84		X					

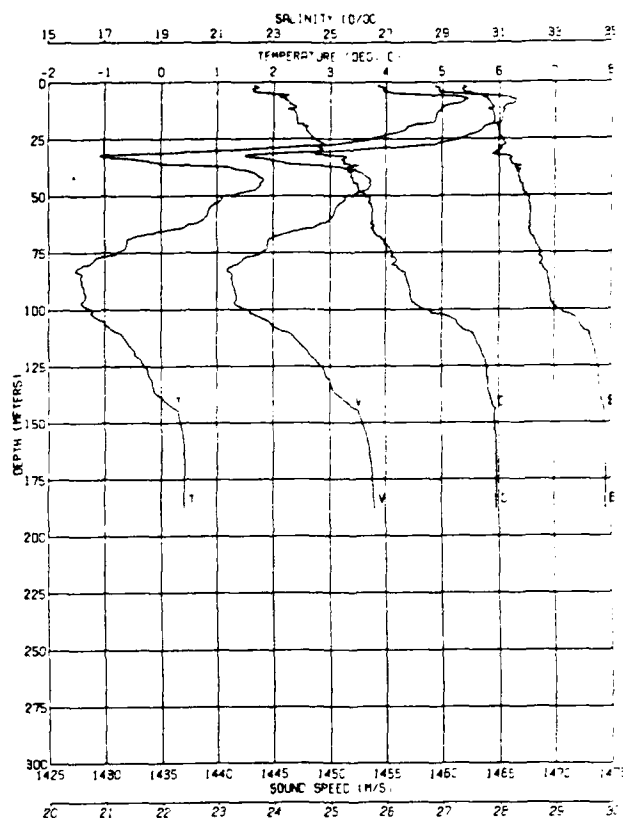
83



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.3	1.3	3.87	28.107	29.785	23.874	1459.7
5.2	5.1	4.28	28.497	29.854	23.779	1461.3
11.4	11.4	5.39	29.856	30.620	24.191	1466.8
17.1	17.0	4.83	29.786	30.836	24.411	1465.3
22.2	22.1	4.01	29.287	31.117	24.725	1461.9
27.2	27.0	2.74	28.426	31.312	24.891	1456.8
32.2	32.0	-0.25	28.234	31.540	25.350	1443.8
37.3	37.1	1.76	28.013	31.768	25.426	1453.3
42.3	42.1	1.76	28.089	31.868	25.507	1453.5
47.5	47.2	1.07	27.726	32.105	25.739	1450.8
52.6	52.3	0.83	27.570	32.150	25.780	1449.9
57.7	57.3	0.73	27.505	32.180	25.803	1449.5
62.8	62.5	-0.08	26.860	32.178	25.857	1445.9
68.0	67.8	-0.85	26.560	32.369	26.034	1443.6
73.1	72.7	-0.75	26.592	32.520	26.159	1443.4
78.3	77.9	-1.49	26.016	32.534	26.181	1440.0
83.5	83.0	-1.57	26.004	32.713	26.358	1440.0
88.6	88.1	-1.49	26.241	32.635	26.436	1440.6
93.8	93.2	-1.34	26.394	32.682	26.470	1441.5
100.1	99.5	-1.30	26.603	33.115	26.657	1442.1
106.4	105.7	-0.96	27.517	33.987	27.351	1444.9
112.7	111.9	-0.66	28.030	34.336	27.622	1446.9
118.7	117.8	-0.48	28.306	34.497	27.744	1448.1
123.7	122.9	-0.36	28.463	34.566	27.795	1448.8
128.6	127.8	-0.23	28.617	34.621	27.833	1449.6
133.5	132.6	-0.20	28.649	34.629	27.838	1449.8
138.4	137.5	-0.15	28.713	34.653	27.854	1450.1
143.1	142.1	0.01	28.889	34.716	27.897	1451.0
147.9	146.8	0.25	29.175	34.810	27.959	1452.3
152.2	151.1	0.32	29.249	34.825	27.968	1452.7

84

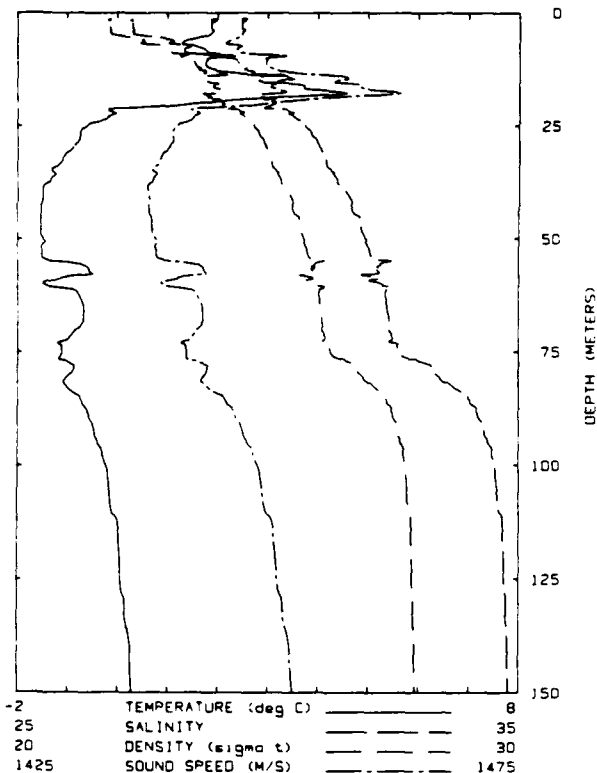


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
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5.1	4.42	1461.7	23.91	30.10
10.3	5.09	1465.7	21.36	30.76
15.1	4.88	1465.3	24.42	30.82
20.1	6.37	1463.6	24.57	30.96
25.1	3.74	1461.5	24.76	31.13
30.2	1.04	1451.2	24.86	31.04
35.3	-0.07	1445.9	25.27	31.46
40.2	1.69	1452.9	25.37	31.69
45.1	1.77	1453.6	25.50	31.86
50.3	1.08	1451.3	25.65	32.00
55.3	0.86	1450.5	25.74	32.10
60.2	0.77	1450.1	25.76	32.11
65.3	0.04	1447.2	25.77	32.08
70.3	-0.60	1444.5	25.97	32.29
75.0	-0.78	1443.9	26.12	32.48
80.1	-1.28	1441.8	26.10	32.43
85.1	-1.42	1441.3	26.34	32.73
90.2	-1.38	1441.5	26.42	32.81
95.5	-1.36	1441.7	26.46	32.87
100.4	-1.22	1442.8	26.77	33.26
110.3	-0.73	1446.4	27.56	34.25
120.3	-0.46	1448.3	27.74	34.49
130.0	-0.21	1449.8	27.82	34.60
140.1	0.05	1451.2	27.87	34.69
150.1	0.34	1452.9	27.94	34.79
160.0	0.40	1453.4	27.95	34.81
170.1	0.41	1453.7	27.96	34.82
180.3	0.41	1453.9	27.96	34.82
188.3	0.41	1454.0	27.96	34.82

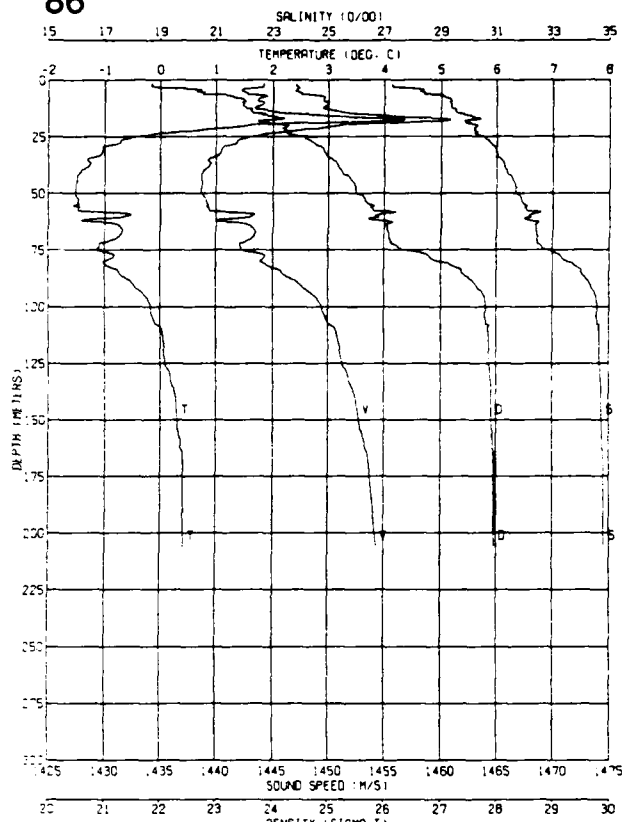
Station Number 85 86 ASL Cast X APL Cast X Julian Day 246 GMT hhmm 1150 Platform Ship Latitude 71 50.3 Longitude 155 14.7

85



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.5	1.5	1.80	24.501	27.308	21.856	1447.5
2.7	2.7	1.87	24.476	27.306	21.857	1447.4
8.1	8.1	1.33	25.229	28.715	23.011	1446.9
13.2	13.2	2.07	26.587	29.720	23.770	1451.6
18.2	18.2	4.45	28.582	29.869	23.895	1482.1
23.3	23.3	-0.20	25.500	30.527	24.533	1442.5
28.3	28.3	-0.78	25.404	30.862	24.802	1440.8
33.5	33.4	-1.14	25.282	31.155	25.068	1439.1
38.9	38.7	-1.50	25.278	31.557	25.401	1438.0
46.5	46.2	-1.53	25.471	31.842	25.833	1436.4
52.8	52.5	-1.50	25.631	32.033	25.786	1436.9
59.0	58.7	-1.11	26.037	32.187	25.885	1441.0
65.4	65.0	-0.88	26.546	32.382	26.045	1443.5
71.3	70.8	-0.89	26.441	32.472	26.125	1442.7
77.2	76.8	-1.17	26.596	32.981	26.545	1442.1
83.3	82.8	-1.01	27.272	33.718	27.136	1444.0
89.0	88.5	-0.59	27.871	34.184	27.496	1446.7
94.3	93.7	-0.45	28.205	34.340	27.616	1447.8
99.5	98.9	-0.26	28.483	34.495	27.732	1448.8
104.7	104.0	-0.17	28.808	34.556	27.777	1449.4
109.8	109.1	-0.13	28.880	34.604	27.814	1449.7
115.0	114.2	0.03	28.878	34.685	27.871	1450.6
120.2	119.4	0.05	28.912	34.703	27.884	1450.8
125.3	124.4	0.07	28.937	34.712	27.890	1451.0
130.3	129.4	0.15	29.029	34.742	27.911	1451.5
135.4	134.5	0.18	29.073	34.781	27.924	1451.7
140.5	139.5	0.26	29.159	34.777	27.933	1452.2
145.5	144.5	0.27	29.178	34.786	27.939	1452.4
150.6	149.5	0.29	29.187	34.793	27.944	1452.5
153.6	152.5	0.30	29.208	34.796	27.946	1452.6

86

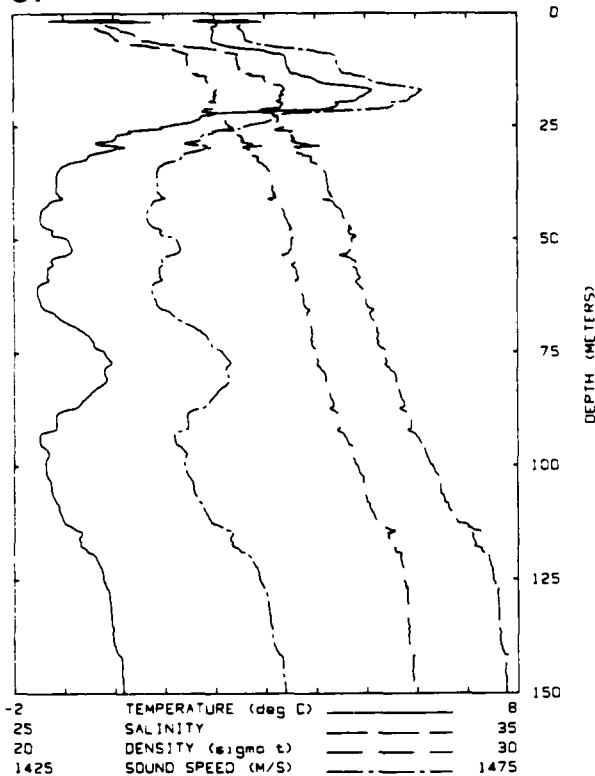


DEPTH (M): T (C) V (M/S) DENSITY S (10/00)

5.1	1.49	1447.1	22.65	28.27
10.4	1.83	1450.0	23.48	29.33
15.0	2.41	1452.7	23.86	29.84
20.2	1.54	1450.9	24.28	30.33
25.1	-0.51	1442.9	24.56	30.57
30.1	-1.03	1440.6	24.92	30.96
35.0	-1.32	1439.3	25.08	31.17
40.2	-1.43	1438.8	25.24	31.36
45.1	-1.51	1438.7	25.45	31.62
50.0	-1.52	1438.7	25.51	31.69
55.1	-1.50	1439.3	25.79	32.03
60.1	-1.65	1443.0	25.86	32.15
65.2	-1.70	1443.2	26.05	32.38
70.3	-1.82	1443.1	26.11	32.46
75.3	-1.10	1442.6	26.52	32.95
80.2	-1.04	1443.9	27.00	33.55
85.3	-1.73	1445.9	27.38	34.04
90.3	-1.48	1447.5	27.63	34.36
95.2	-1.27	1448.8	27.78	34.55
100.1	-1.17	1449.4	27.81	34.59
110.2	-0.03	1450.7	27.85	34.66
120.1	0.07	1451.1	27.87	34.68
130.1	0.17	1451.8	27.89	34.72
140.1	0.28	1452.5	27.91	34.75
150.1	0.30	1452.8	27.92	34.76
160.1	0.37	1453.3	27.94	34.80
170.4	0.40	1453.7	27.96	34.82
180.3	0.41	1453.9	27.96	34.82
190.2	0.41	1454.1	27.96	34.82
200.1	0.41	1454.2	27.96	34.82
205.8	0.41	1454.3	27.96	34.82

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
87	X		246	1251	Ship	71 47.6	155 11.1
88		X					

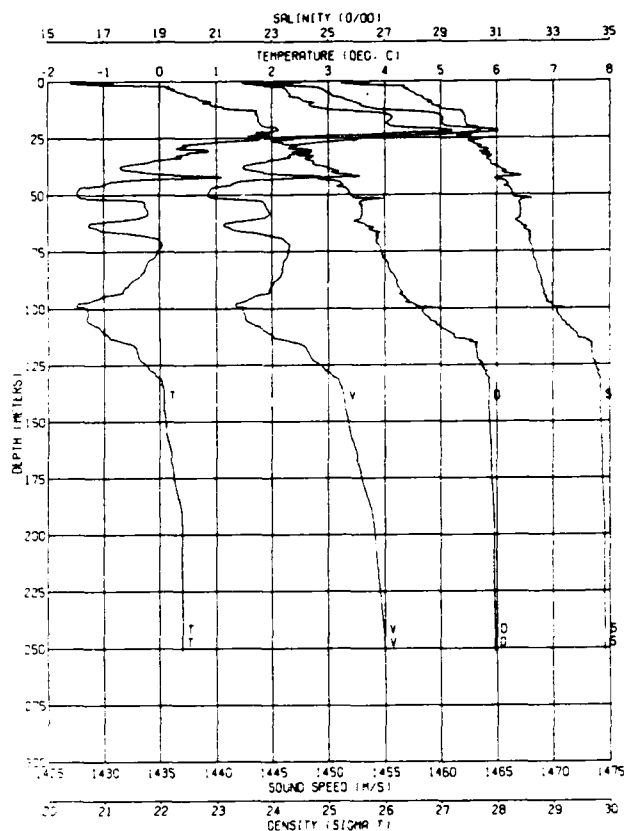
87



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.8	1.8	1.87	23.801	28.408	21.148	1445.3
1.7	1.7	1.88	24.447	27.184	21.737	1447.7
5.8	5.8	1.85	24.721	27.538	22.035	1448.1
11.2	11.1	3.42	27.403	28.445	23.451	1457.1
16.4	16.4	4.78	28.225	30.345	24.041	1464.0
21.7	21.8	3.84	27.884	29.810	23.802	1458.8
27.3	27.2	0.05	25.703	30.541	24.535	1443.8
32.6	32.7	-0.84	25.440	30.897	24.837	1441.1
38.3	38.1	-1.15	25.324	31.251	25.145	1438.3
45.8	45.8	-1.48	25.320	31.583	25.422	1438.3
52.3	52.0	-0.85	25.804	31.708	25.507	1441.5
58.8	58.5	-1.33	25.858	31.880	25.858	1439.6
65.4	65.0	-1.43	25.891	32.028	25.781	1439.4
71.8	71.5	-0.51	28.585	32.224	25.911	1444.1
77.5	77.0	-0.08	27.048	32.406	26.041	1446.5
83.0	82.5	-0.28	27.080	32.631	26.230	1445.9
88.8	88.2	-1.10	28.527	32.804	26.400	1442.4
95.0	94.4	-1.50	28.388	33.058	26.616	1441.0
100.6	99.9	-1.37	28.706	33.333	26.835	1442.1
106.8	106.1	-1.24	28.822	33.484	26.954	1443.0
112.3	111.5	-1.04	27.300	33.771	27.179	1444.4
117.6	116.8	-0.88	27.884	34.184	27.483	1446.7
122.9	122.1	-0.28	28.482	34.483	27.724	1449.0
128.1	127.3	-0.13	28.680	34.607	27.816	1450.0
133.2	132.3	-0.07	28.747	34.812	27.817	1450.4
138.4	137.4	-0.03	28.811	34.844	27.841	1450.7
143.5	142.5	0.15	28.045	34.757	27.822	1451.7
148.6	147.6	0.17	29.070	34.783	27.828	1451.8
153.5	152.4	0.18	29.088	34.759	27.824	1451.8

88

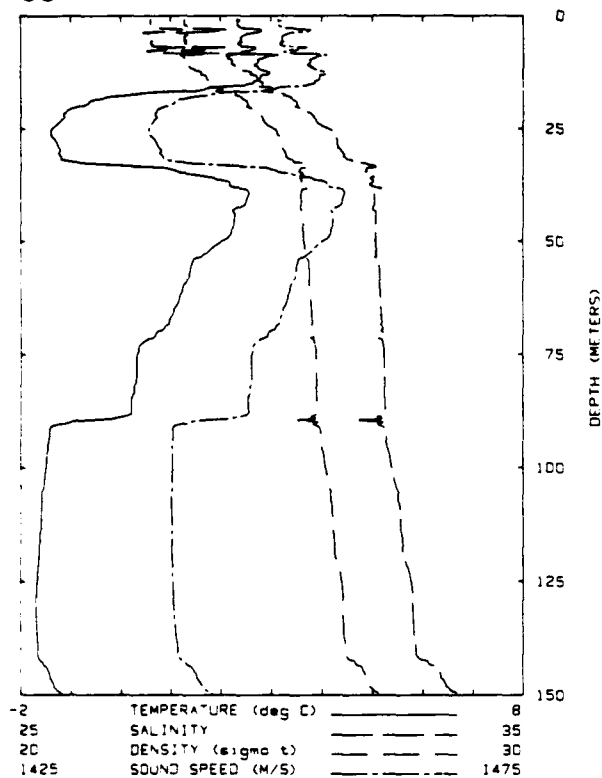


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
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5.4	2.32	1450.2	22.45	28.08
10.4	2.68	1452.9	22.92	28.69
15.1	4.11	1460.0	23.74	29.85
20.3	4.31	1461.5	24.06	30.28
25.5	1.77	1452.7	24.39	30.49
30.2	.84	1448.5	24.64	30.72
35.0	-.13	1444.7	24.72	30.78
40.2	-.24	1444.2	25.11	31.25
45.4	-.99	1441.4	25.26	31.41
50.0	-1.46	1439.3	25.40	31.55
55.2	-.26	1444.5	25.60	31.85
60.3	-.39	1444.2	25.60	31.84
65.1	-1.10	1441.4	25.73	31.97
70.0	-.01	1446.2	25.86	32.18
75.0	-.05	1446.4	25.95	32.30
80.1	-.22	1446.0	26.05	32.41
85.0	-.34	1445.8	26.15	32.53
90.3	-.56	1445.0	26.23	32.62
95.2	-1.05	1443.3	26.38	32.78
100.1	-1.30	1442.3	26.65	33.11
110.3	-1.03	1444.5	27.14	33.72
120.1	-.40	1448.3	27.64	34.37
130.0	-.05	1450.5	27.85	34.65
140.1	.08	1451.4	27.87	34.68
150.1	.11	1451.8	27.87	34.69
160.2	.17	1452.3	27.89	34.72
170.2	.24	1452.8	27.91	34.74
180.3	.30	1453.3	27.92	34.77
190.0	.39	1453.9	27.94	34.80
200.1	.40	1454.1	27.95	34.80
210.1	.40	1454.3	27.95	34.81
220.1	.40	1454.5	27.95	34.81
230.3	.41	1454.7	27.96	34.82
240.1	.41	1454.9	27.96	34.83
250.4	.40	1455.0	27.97	34.83
251.3	.40	1455.1	27.97	34.84

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
89	X		246	1400	Ship	71 45.4	155 4.9
90		X					

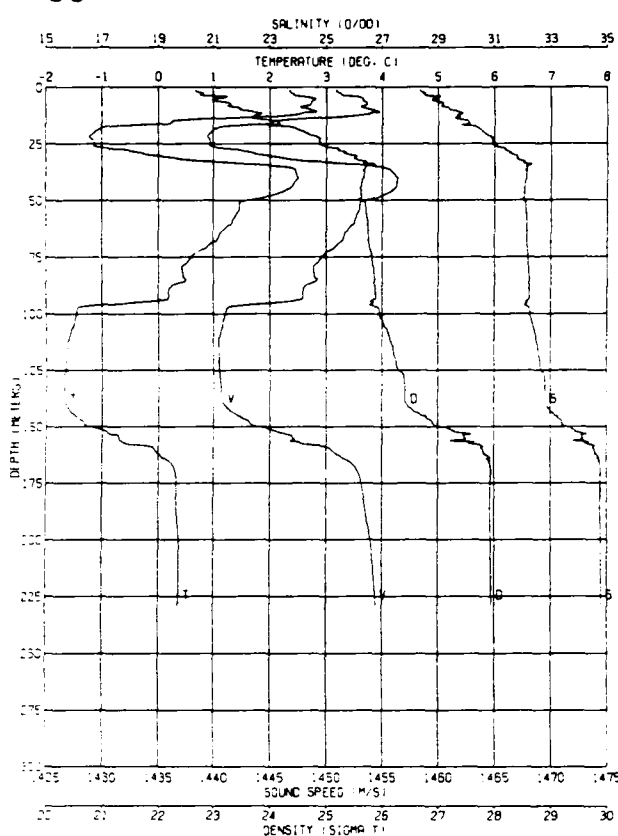
89



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
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1.1	1.1	2.33	25.803	28.277	22.603	1450.7
4.9	4.9	2.30	25.855	28.281	22.602	1451.0
10.1	10.1	2.74	26.884	28.207	22.315	1453.9
15.3	15.2	2.51	27.032	28.842	23.837	1453.7
20.5	20.4	-0.93	24.965	30.553	24.576	1439.1
26.4	26.2	-1.39	25.107	31.218	25.125	1437.9
32.9	32.7	-0.73	26.089	31.841	25.810	1442.0
38.3	38.1	2.26	28.878	32.088	25.844	1455.9
43.5	43.2	2.23	28.821	32.044	25.813	1455.8
48.8	48.5	2.20	28.811	32.058	25.827	1455.8
54.0	53.7	1.50	28.058	32.074	25.688	1452.8
59.1	58.8	1.32	27.884	32.145	25.756	1452.2
64.5	64.1	1.11	27.821	32.188	25.787	1451.4
69.8	69.3	0.85	27.844	32.210	25.836	1450.3
75.1	74.7	0.34	27.245	32.227	25.877	1448.1
80.5	80.0	0.30	27.228	32.241	25.890	1448.0
85.8	85.2	0.20	27.160	32.255	25.906	1447.7
91.0	90.5	-1.24	25.803	32.103	26.006	1440.1
96.4	95.8	-1.46	25.878	32.308	26.088	1440.1
101.8	101.0	-1.52	25.913	32.406	26.182	1440.1
106.9	106.2	-1.57	25.951	32.520	26.250	1440.1
112.1	111.4	-1.59	25.970	32.562	26.217	1440.1
117.3	116.5	-1.82	25.877	32.602	26.250	1440.1
122.6	121.7	-1.85	26.027	32.700	26.330	1440.2
127.7	126.8	-1.88	26.073	32.794	26.407	1440.3
132.9	131.8	-1.88	26.093	32.815	26.424	1440.4
138.0	137.1	-1.87	26.124	32.841	26.445	1440.6
143.1	142.1	-1.82	26.258	32.877	26.553	1441.0
148.1	147.1	-1.37	28.808	33.444	28.825	1443.0
151.7	150.8	-1.12	27.231	33.748	27.184	1444.8

90

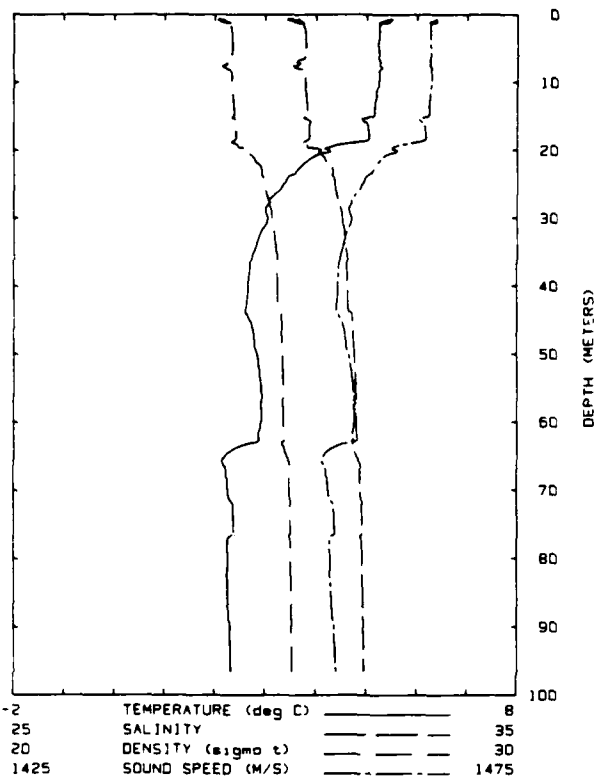


DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
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5.4	2.82	1453.3	22.99	28.80
10.3	2.75	1454.1	23.54	29.48
15.1	.24	1445.2	24.14	30.07
20.4	-1.15	1439.7	24.68	30.68
25.4	-1.13	1439.6	24.88	30.93
30.1	-1.14	1444.4	25.43	31.64
35.0	2.20	1454.3	25.68	32.10
40.2	2.51	1456.4	25.66	32.10
45.1	2.31	1456.0	25.62	32.03
50.3	1.51	1453.2	25.65	32.03
55.3	1.42	1452.8	25.71	32.09
60.1	1.32	1452.5	25.74	32.12
65.2	1.11	1451.6	25.76	32.13
70.0	.91	1450.9	25.77	32.14
75.0	.59	1449.6	25.82	32.17
80.2	.43	1448.9	25.85	32.20
85.1	.49	1449.2	25.86	32.21
90.2	.19	1448.0	25.88	32.22
95.2	-.52	1445.1	25.83	32.13
100.6	-1.46	1441.0	25.95	32.24
110.3	-1.59	1440.5	26.13	32.45
120.3	-1.63	1440.5	26.25	32.60
130.0	-1.68	1440.6	26.40	32.78
140.2	-1.65	1440.9	26.45	32.85
150.1	-1.22	1443.9	27.04	33.59
160.2	-.08	1450.4	27.81	34.60
170.2	.30	1452.9	27.95	34.80
180.2	.32	1453.3	27.93	34.78
190.0	.33	1453.6	27.92	34.77
200.2	.36	1454.0	27.94	34.79
210.3	.37	1454.2	27.95	34.80
220.1	.36	1454.3	27.95	34.80
229.2	.36	1454.4	27.94	34.80

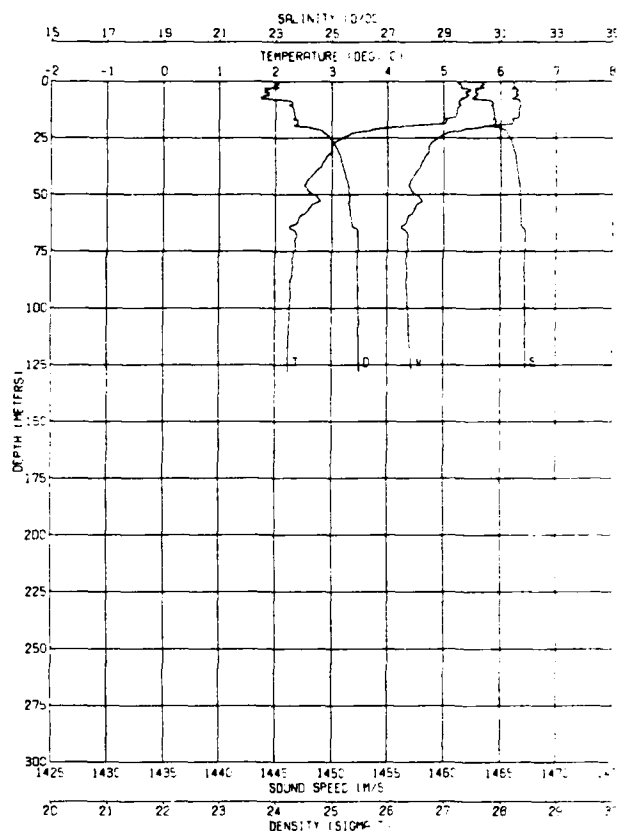
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
91	X		246	1502	Ship	71 41.8	155 3.8
92		X					

91



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.2	1.2	5.35	30.007	30.702	24.280	1466.6
2.8	2.8	5.23	29.878	30.780	24.335	1466.3
8.0	7.9	5.31	29.912	30.830	24.208	1466.5
13.2	13.1	5.18	29.997	30.822	24.378	1466.2
18.2	18.1	5.05	29.917	30.888	24.454	1465.9
23.4	23.2	5.80	29.137	31.331	24.933	1460.5
28.5	28.3	5.02	29.787	31.472	25.095	1458.3
33.6	33.5	2.84	28.722	31.568	25.187	1457.2
38.8	38.7	2.88	28.828	31.624	25.244	1457.2
44.0	43.7	2.80	28.584	31.645	25.287	1458.9
49.2	48.9	2.79	28.831	31.739	25.327	1458.0
54.2	53.8	2.80	28.956	31.777	25.348	1458.6
59.3	58.0	2.83	28.887	31.787	25.361	1458.4
64.3	63.8	2.38	28.514	31.743	25.361	1456.5
69.4	68.0	2.28	28.523	31.882	25.482	1456.2
74.3	73.8	2.38	28.648	31.915	25.500	1456.8
79.3	78.8	2.25	28.580	31.927	25.518	1456.4
84.1	83.8	2.28	28.570	31.930	25.520	1456.5
89.1	88.6	2.28	28.809	31.948	25.533	1456.7
94.0	93.4	2.32	28.640	31.949	25.531	1456.8
97.0	96.4	2.33	28.643	31.943	25.525	1457.0

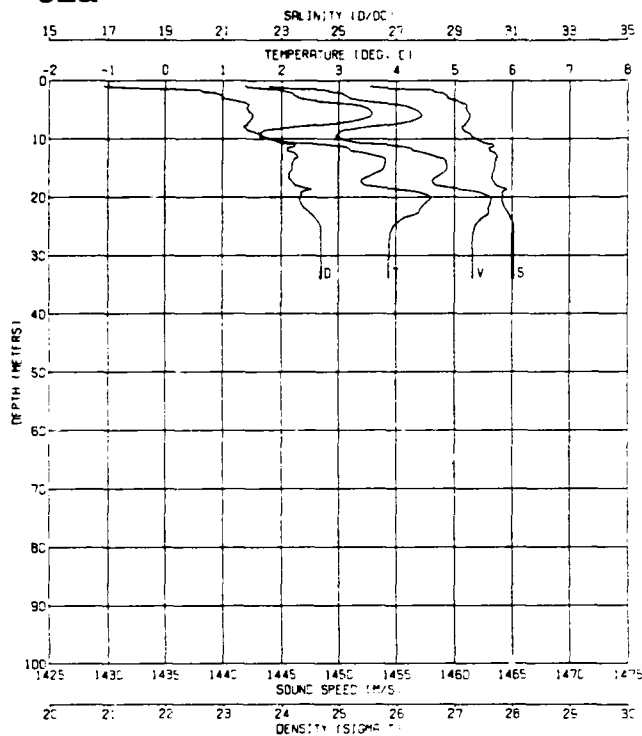
92



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	5.40	1466.4	23.86	30.18
10.4	5.32	1466.8	24.25	30.66
15.0	5.22	1466.6	24.34	30.77
20.3	4.21	1463.4	24.63	31.03
25.2	3.18	1459.5	24.98	31.34
30.2	3.00	1458.7	25.10	31.48
35.1	2.86	1458.1	25.17	31.55
40.1	2.69	1457.5	25.24	31.61
45.1	2.54	1457.0	25.28	31.66
50.4	2.71	1457.7	25.33	31.73
55.2	2.63	1457.5	25.32	31.71
60.2	2.42	1456.8	25.35	31.73
65.2	2.30	1456.4	25.46	31.85
70.2	2.35	1456.7	25.47	31.87
75.0	2.35	1456.8	25.46	31.86
80.1	2.32	1456.8	25.47	31.87
85.3	2.31	1456.8	25.47	31.87
90.3	2.27	1456.7	25.48	31.88
95.3	2.28	1456.8	25.47	31.87
100.4	2.26	1456.8	25.48	31.88
110.1	2.25	1457.0	25.49	31.88
120.1	2.23	1457.1	25.49	31.89
128.4	2.23	1457.2	25.50	31.90

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
92a		X	246	1640	Ship	71 33.7	154 49.3

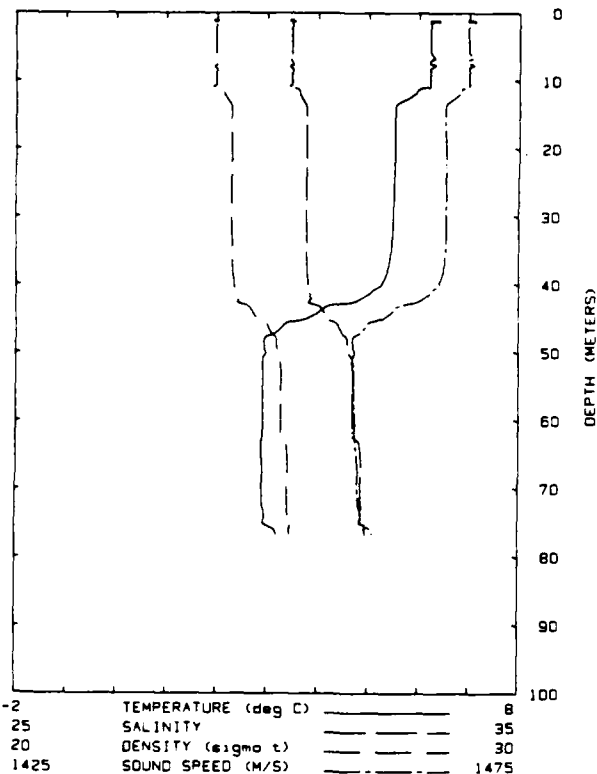
92a



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	3.54	1456.8	23.45	29.43
10.3	1.89	1450.7	23.89	29.84
15.3	3.77	1459.4	24.19	30.38
20.4	4.58	1463.2	24.32	30.64
25.2	3.93	1461.7	24.69	31.05
30.5	3.88	1461.6	24.70	31.06
32.7	3.86	1461.6	24.69	31.04

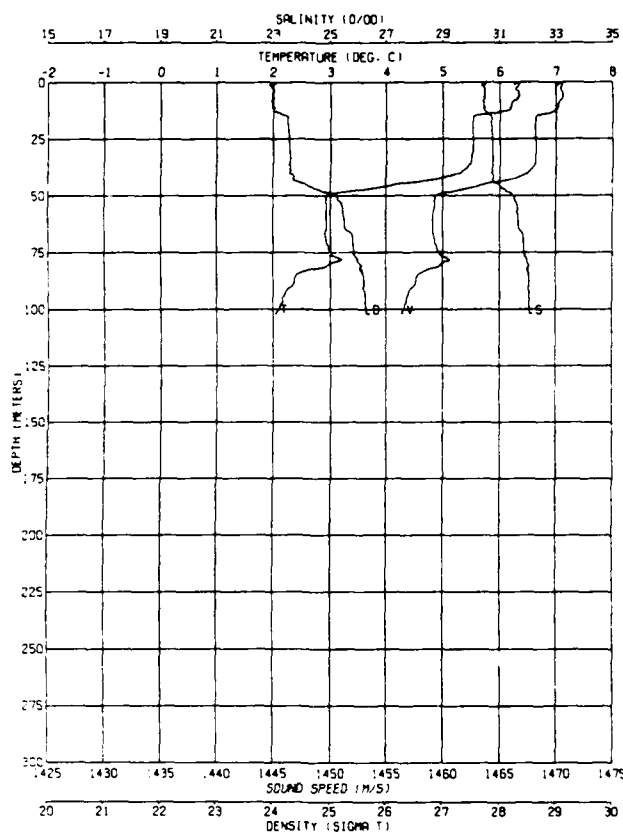
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
93	X		247	0048	Ship	71 25.3	156 47.0
94		X					

93



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	8.22	30.515	30.483	23.988	1489.9
5.8	5.8	8.22	30.508	30.475	23.981	1489.8
11.0	10.8	8.22	30.443	30.399	23.920	1489.9
16.5	16.4	5.52	30.305	30.770	24.285	1487.6
22.6	22.5	5.52	30.211	30.772	24.287	1487.7
28.3	28.1	5.50	30.207	30.778	24.303	1487.8
33.4	33.2	5.48	30.181	30.781	24.308	1487.8
38.5	38.3	5.32	30.084	30.804	24.344	1487.2
44.6	44.6	3.82	29.247	31.147	24.758	1482.0
50.1	49.8	2.87	28.875	31.618	25.217	1459.6
55.2	54.9	2.82	28.908	31.699	25.284	1458.6
60.4	60.1	2.82	28.908	31.687	25.283	1458.7
65.7	65.3	2.80	28.025	31.658	25.413	1458.9
71.0	70.8	2.82	28.054	31.668	25.419	1459.1
76.0	75.6	3.05	28.228	31.846	25.470	1459.8

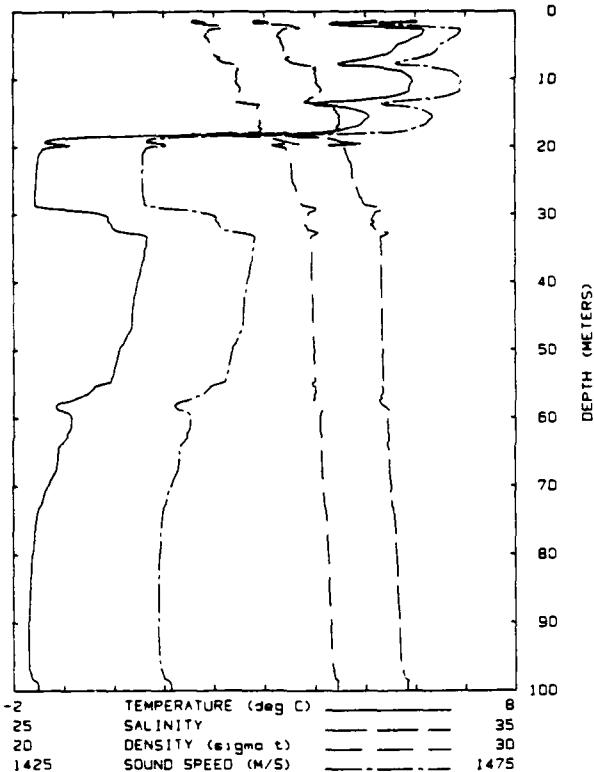
94



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.5	6.34	1470.6	24.01
10.3	6.20	1470.2	23.99
15.1	5.53	1468.2	24.25
20.4	5.54	1468.1	24.27
25.1	5.54	1468.2	24.28
30.1	5.53	1468.2	24.29
36.1	5.49	1468.1	24.29
40.2	5.30	1467.5	24.28
45.0	4.17	1463.7	24.59
50.4	2.91	1459.3	25.12
55.3	2.93	1459.2	25.22
60.1	2.93	1459.1	25.25
65.1	2.92	1459.1	25.29
70.3	2.92	1459.3	25.39
75.0	3.00	1459.6	25.41
80.2	2.95	1459.8	25.55
85.1	2.40	1457.8	25.60
90.4	2.30	1457.3	25.57
95.3	2.17	1456.8	25.63
100.1	2.10	1456.6	25.64
102.2	2.06	1456.4	25.68

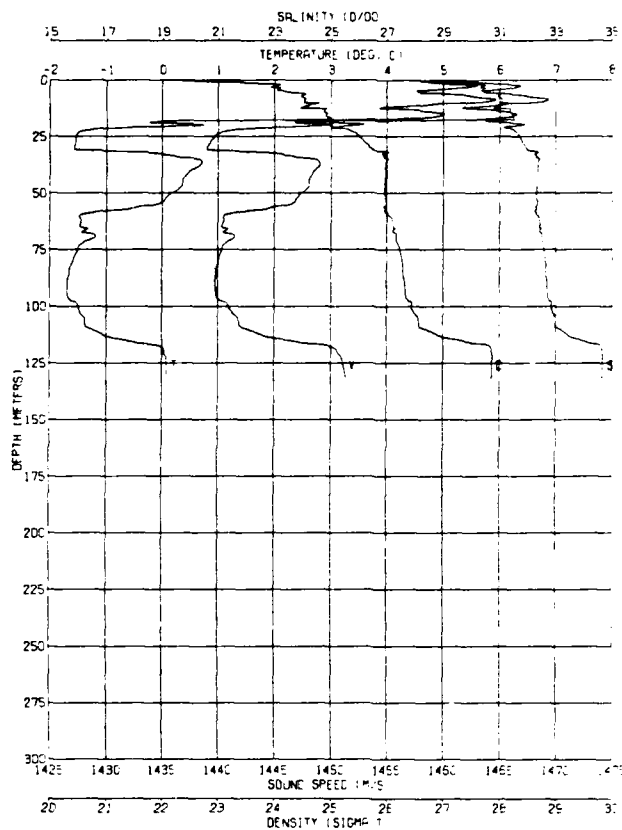
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
95	X		247	0202	Ship	71 31.8	156 55.2
96		X					

95



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.7	1.7	5.21	28.188	28.820	23.858	1485.1
3.8	3.8	8.08	30.173	30.252	23.826	1489.0
8.8	8.7	5.57	30.478	31.024	24.488	1488.1
13.7	13.6	4.00	28.173	30.888	24.633	1481.6
18.7	18.6	-0.58	25.553	30.887	24.818	1441.3
23.6	23.7	-1.53	25.374	31.731	25.543	1437.9
28.3	28.1	-1.27	26.025	32.333	26.024	1440.0
34.5	34.3	0.85	27.548	32.316	25.933	1449.0
38.7	39.5	0.50	27.419	32.305	25.932	1448.4
44.9	44.7	0.37	27.332	32.326	25.955	1447.9
50.1	48.8	0.10	27.130	32.339	25.979	1446.8
55.3	54.8	-0.18	26.872	32.288	25.933	1445.6
60.8	60.2	-0.85	26.440	32.428	26.089	1442.6
66.1	65.7	-1.11	26.288	32.478	26.138	1441.5
71.7	71.3	-1.38	26.081	32.516	26.174	1440.4
76.7	76.3	-1.57	25.894	32.586	26.244	1439.7
81.8	81.4	-1.84	25.885	32.631	26.274	1439.5
86.8	86.3	-1.87	25.983	32.654	26.283	1439.5
91.8	91.3	-1.70	25.988	32.687	26.320	1439.5
97.0	96.3	-1.68	26.004	32.721	26.348	1439.6
101.8	101.2	-1.50	26.243	32.843	26.442	1440.8

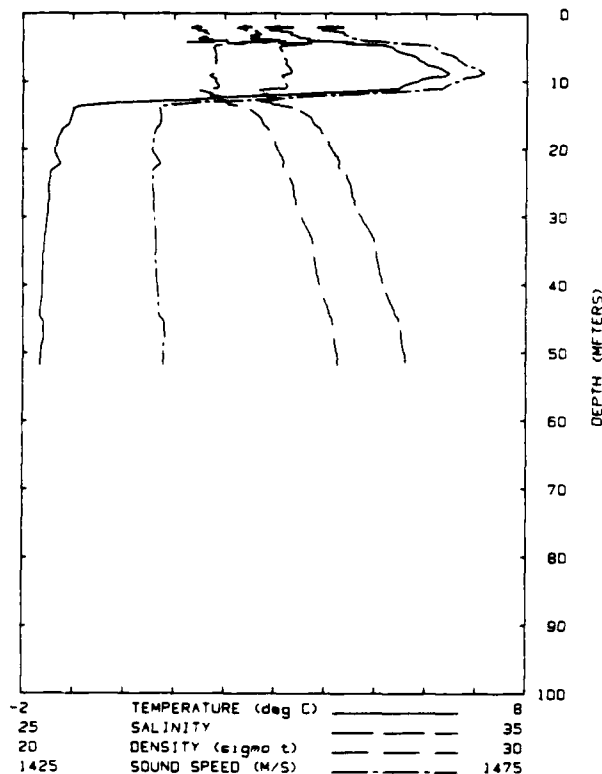
96



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	4.49	1463.5	24.27	30.60
10.1	5.40	1467.8	24.60	31.11
15.3	5.05	1466.7	24.90	31.45
20.4	.62	1449.6	25.02	31.22
25.1	-1.53	1440.3	25.37	31.53
30.1	-1.57	1439.6	25.56	31.76
35.0	.61	1448.7	25.98	32.37
40.2	.51	1448.6	25.95	32.33
45.1	.37	1448.1	25.97	32.34
50.2	.19	1447.4	25.94	32.30
55.3	-.12	1446.2	25.95	32.29
60.3	-1.49	1440.6	26.04	32.35
65.1	-1.45	1440.5	26.08	32.40
70.0	-1.22	1441.5	26.14	32.48
75.1	-1.50	1440.4	26.22	32.56
80.3	-1.60	1440.1	26.25	32.62
85.1	-1.65	1439.9	26.28	32.64
90.4	-1.69	1439.8	26.31	32.68
96.0	-1.68	1439.9	26.34	32.71
100.1	-1.50	1440.9	26.44	32.84
110.1	-1.25	1442.7	26.74	33.21
120.0	.04	1450.5	27.88	34.69
130.3	.09	1451.2	27.89	34.71
131.5	.09	1451.3	27.86	34.67

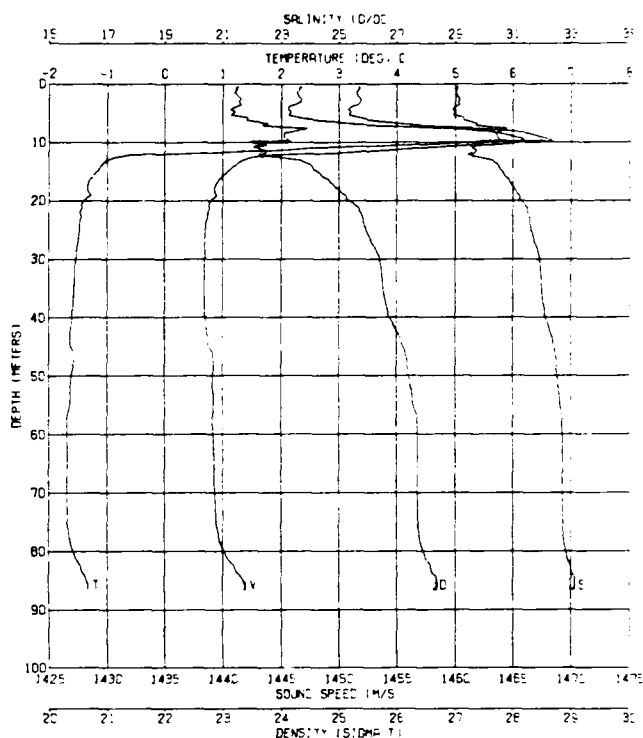
Station Number 97 99 ASL Cast X APL Cast X Julian Day 247 GMT hhmm 0258 Platform Ship Latitude 71 34.4 Longitude 156 58.4

97



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	2.05	27.034	29.353	23.408	1455.2
4.1	4.1	3.03	28.225	30.230	24.057	1458.9
8.5	8.5	6.05	30.088	30.181	23.755	1468.9
15.0	14.9	-1.02	24.838	30.810	24.824	1438.7
18.8	18.7	-1.35	25.047	31.083	25.022	1437.8
25.9	25.8	-1.48	25.252	31.515	25.367	1437.8
32.2	32.0	-1.55	25.474	31.878	25.862	1438.1
38.5	38.2	-1.81	25.593	32.084	25.838	1438.2
44.4	44.2	-1.86	25.745	32.384	26.082	1438.5
50.0	48.8	-1.85	25.885	32.581	26.217	1438.8

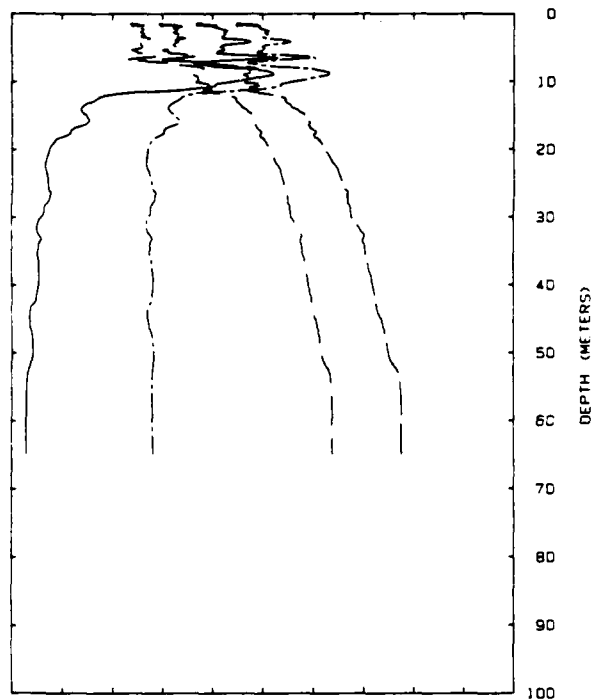
99



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	2.14	1450.9	23.14
10.4	4.49	1464.0	23.75
15.3	-1.21	1440.3	24.67
20.1	-1.42	1438.9	25.20
25.2	-1.49	1438.5	25.48
30.2	-1.54	1438.5	25.71
35.3	-1.58	1438.4	25.77
40.2	-1.61	1438.6	25.90
45.0	-1.64	1438.8	26.11
50.6	-1.63	1439.2	26.22
55.1	-1.66	1439.2	26.27
60.2	-1.70	1439.2	26.35
65.2	-1.71	1439.3	26.35
70.2	-1.71	1439.3	26.35
75.1	-1.70	1439.5	26.35
80.2	-1.59	1440.2	26.44
85.4	-1.34	1441.8	26.69
85.4	-1.33	1441.9	26.66

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
100	X		247	0344	Ship	71 37.7	157 3.3
101		X					

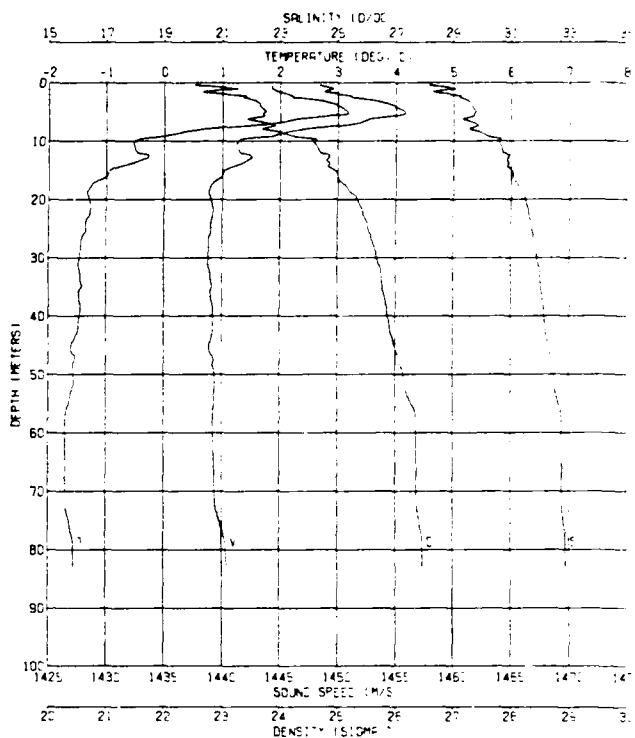
100



-2 TEMPERATURE (deg C) 8
25 SALINITY 35
20 DENSITY (sigma t) 30
1425 SOUND SPEED (M/S) 1475

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	1.84	25.085	28.078	22.474	1448.3
6.1	6.1	2.36	25.750	28.423	22.717	1451.1
11.3	11.2	1.54	26.385	28.865	23.999	1449.5
16.4	16.3	-0.52	25.554	30.826	24.885	1441.4
21.8	21.7	-1.32	25.284	31.360	25.238	1438.3
26.1	26.0	-1.30	25.518	31.678	25.495	1439.0
34.5	34.3	-1.47	25.635	32.020	25.775	1438.7
40.8	40.5	-1.49	25.757	32.187	25.919	1439.0
46.7	46.4	-1.63	25.794	32.400	26.086	1438.7
52.4	52.1	-1.64	25.855	32.625	26.269	1439.0
58.1	57.7	-1.71	25.892	32.758	26.378	1438.9
63.4	63.0	-1.71	25.886	32.761	26.380	1439.0

101

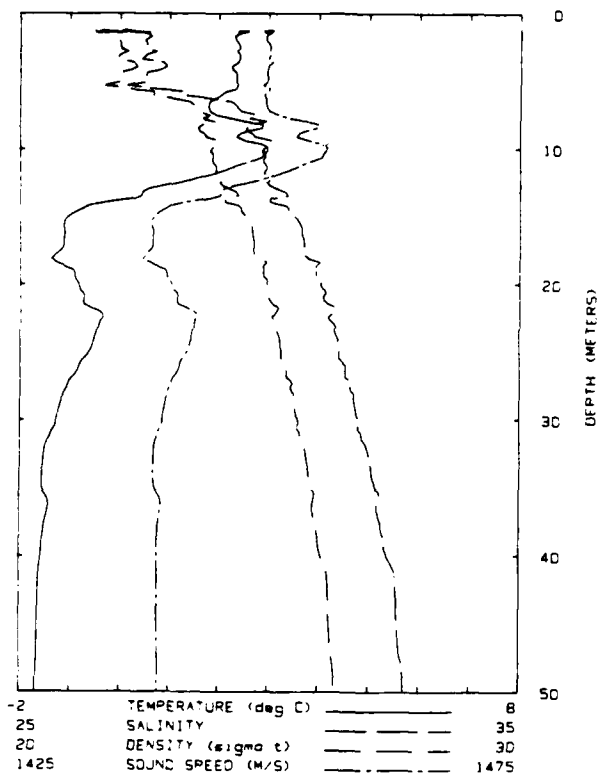


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	3.20	1455.8	23.71	29.72
10.4	-0.52	1441.5	24.55	30.54
15.1	-0.96	1440.3	24.93	30.99
20.3	-1.29	1439.2	25.30	31.44
25.2	-1.35	1439.2	25.49	31.67
30.3	-1.46	1439.0	25.66	31.87
35.3	-1.42	1439.2	25.74	31.97
40.2	-1.45	1439.3	25.85	32.11
45.4	-1.61	1438.9	25.98	32.27
50.0	-1.56	1439.4	26.14	32.46
55.1	-1.64	1439.3	26.26	32.62
60.1	-1.71	1439.3	26.36	32.73
65.3	-1.71	1439.3	26.36	32.74
70.0	-1.70	1439.4	26.37	32.74
75.1	-1.64	1439.8	26.41	32.80
80.1	-1.56	1440.4	26.48	32.88
83.0	-1.56	1440.4	26.48	32.88

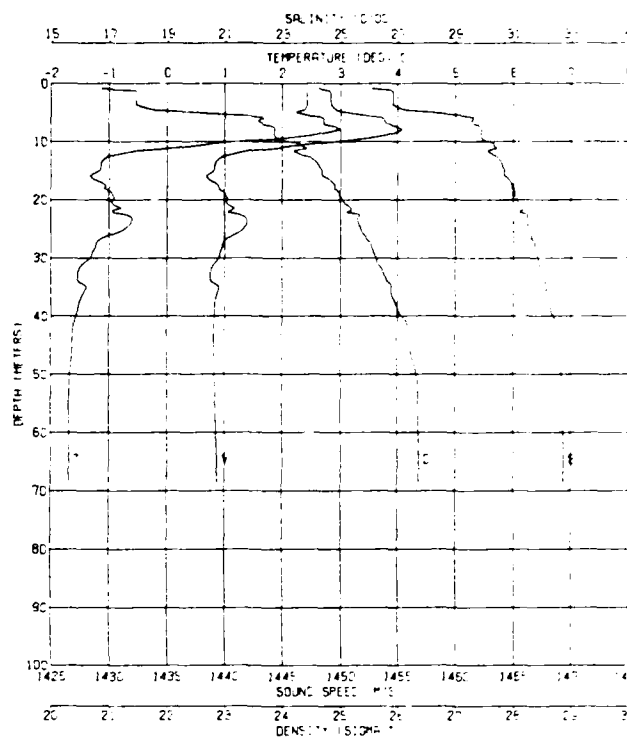
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
102	X		247	0430	Ship	71 40.2	157 6.4
103		X					

102



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
5.1	5.1	2.34	24.901	27.511	21.882	1449.6
10.3	10.2	2.07	27.404	28.883	23.820	1455.7
15.3	15.2	-1.08	24.868	30.582	24.604	1439.3
20.6	20.5	-0.80	25.491	31.124	25.033	1440.5
25.8	25.7	-0.78	25.787	31.478	25.319	1441.1
31.4	31.2	-1.40	25.573	31.858	25.643	1438.8
36.6	36.4	-1.42	25.783	32.185	25.891	1439.2
41.8	41.6	-1.82	25.900	32.538	26.199	1438.8
47.1	46.8	-1.85	25.838	32.417	26.263	1438.8
52.0	51.7	-1.70	25.893	32.745	26.387	1438.9

103

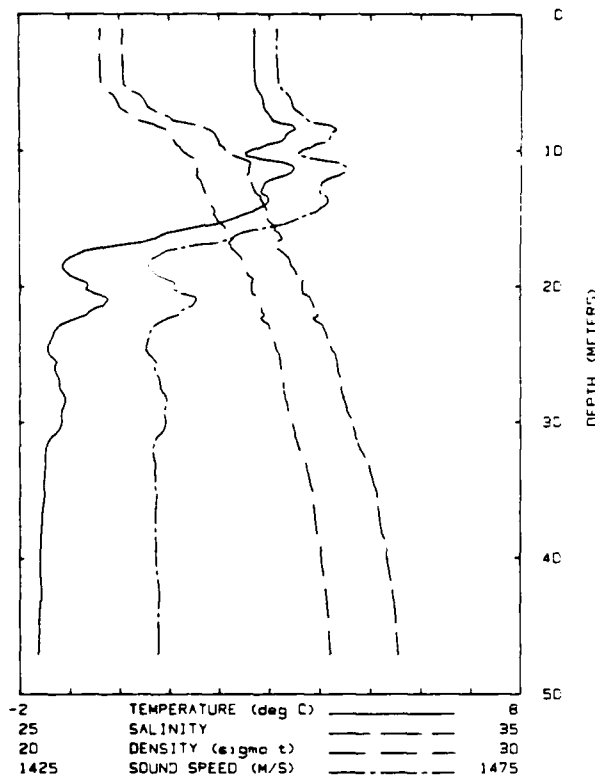


DEPTH (M) T (C) V (M/S) DENSITY S (C/CO)

5.5	2.30	1452.0	23.42	29.30
10.1	1.01	1448.9	24.24	30.24
15.0	-1.16	1439.3	24.62	30.60
20.3	-0.93	1440.5	24.98	31.05
25.2	-0.73	1441.8	25.30	31.46
30.3	-1.34	1439.6	25.59	31.80
35.3	-1.38	1439.7	25.85	32.11
40.3	-1.58	1439.2	26.08	32.39
45.0	-1.63	1439.2	26.20	32.54
50.3	-1.68	1439.2	26.32	32.68
55.3	-1.69	1439.2	26.35	32.73
60.1	-1.70	1439.3	26.36	32.73
65.3	-1.70	1439.4	26.36	32.74
68.5	-1.70	1439.4	26.37	32.75

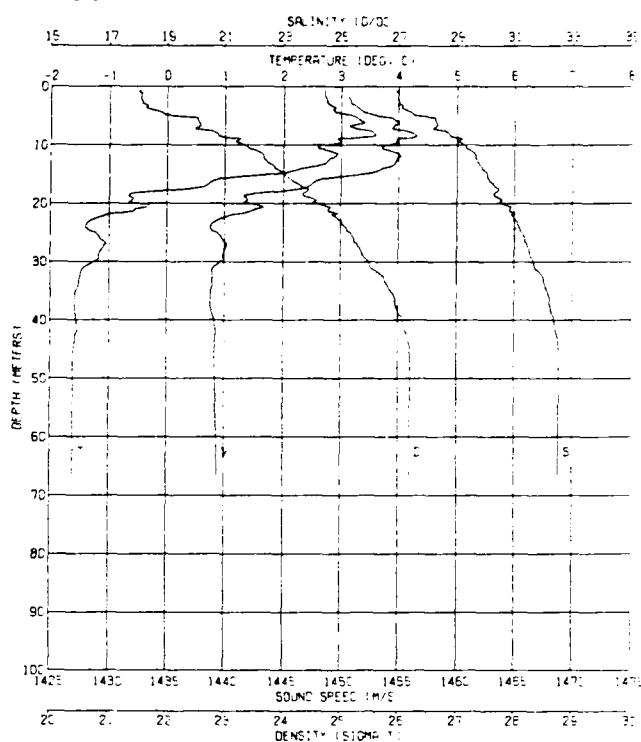
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
104	X		247	0512	Ship	71 43.1	157 8.0
105		X					

104



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
1.2	1.2	2.70	24.861	27.064	21.613	1450.7
1.2	1.2	2.70	24.859	27.063	21.613	1450.7
4.7	4.7	2.71	24.890	27.083	21.627	1450.9
9.6	9.6	2.97	26.896	29.018	23.148	1454.6
14.3	14.3	2.79	27.334	29.949	23.902	1455.1
19.3	19.2	-1.00	24.811	30.552	24.578	1438.7
24.6	24.4	-1.43	25.086	31.230	25.135	1437.7
30.4	30.3	-1.18	25.600	31.660	25.477	1439.6
36.1	35.9	-1.52	25.696	32.149	25.880	1438.7
41.2	41.0	-1.59	25.812	32.384	26.073	1438.8
46.9	46.7	-1.62	25.905	32.547	26.205	1438.9

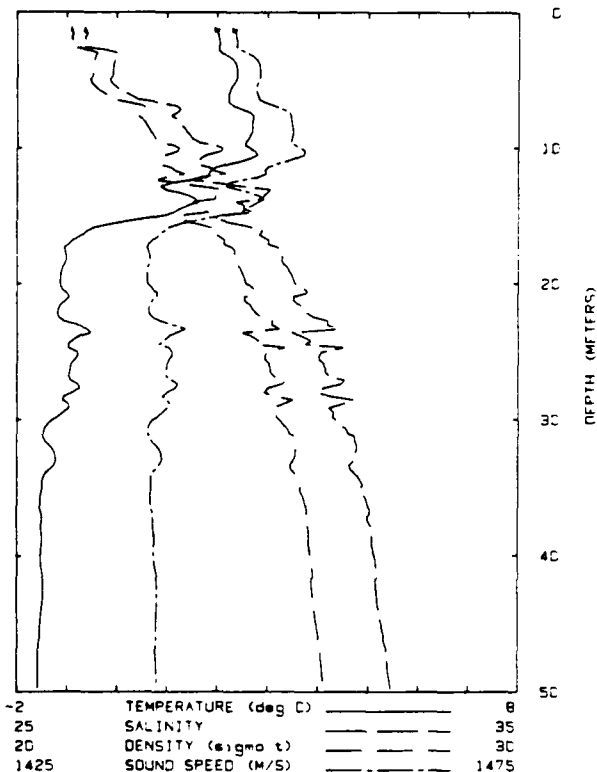
105



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	3.29	1454.5	22.55	28.27
10.1	2.61	1453.7	23.38	29.27
15.1	1.65	1451.5	24.03	30.03
20.3	-1.30	1442.8	24.67	30.70
25.4	-1.21	1439.6	25.18	31.30
30.1	-1.26	1439.8	25.50	31.68
35.1	-1.58	1438.8	25.88	32.15
40.1	-1.56	1439.1	26.08	32.39
45.0	-1.61	1439.2	26.20	32.55
50.2	-1.62	1439.2	26.21	32.56
55.1	-1.62	1439.3	26.21	32.55
60.1	-1.62	1439.4	26.20	32.54
65.1	-1.62	1439.4	26.20	32.53
66.6	-1.62	1439.5	26.21	32.55

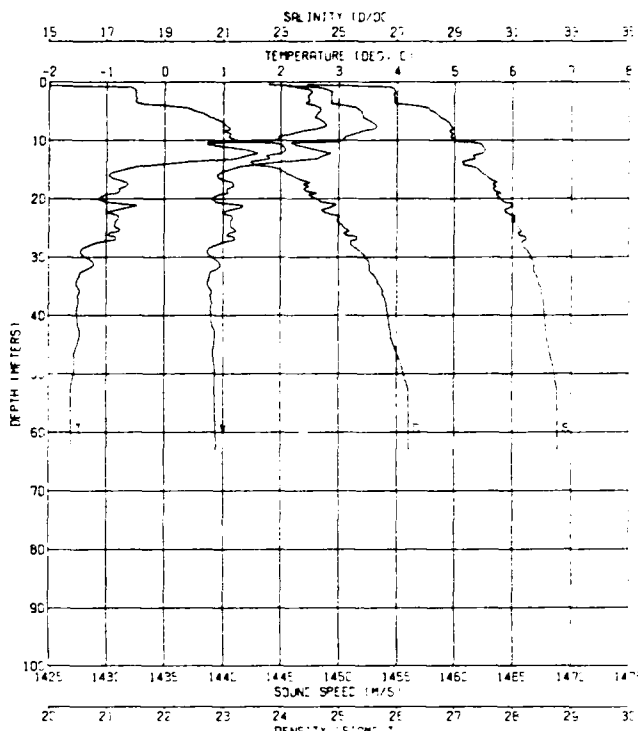
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
106	X		247	0554	Ship	71 45.9	157 12.4
107		X					

106



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	2.02	23.816	26.373	21.104	1446.8
3.9	3.9	2.37	24.513	26.820	21.519	1449.1
6.9	6.9	2.69	25.066	28.396	22.673	1452.5
13.9	13.9	1.58	26.378	28.916	23.957	1445.7
18.9	18.9	-1.09	24.728	30.390	24.448	138.1
24.5	24.5	-0.97	25.093	30.765	24.748	1435.2
30.9	30.9	-1.46	25.309	31.556	25.399	1438.1
37.1	36.9	-1.51	25.619	32.035	25.788	1438.6
43.3	43.0	-1.48	25.757	32.188	25.912	1439.1
49.2	48.9	-1.58	25.854	32.426	26.106	1439.0
53.6	53.3	-1.63	25.910	32.561	26.217	1439.0

107

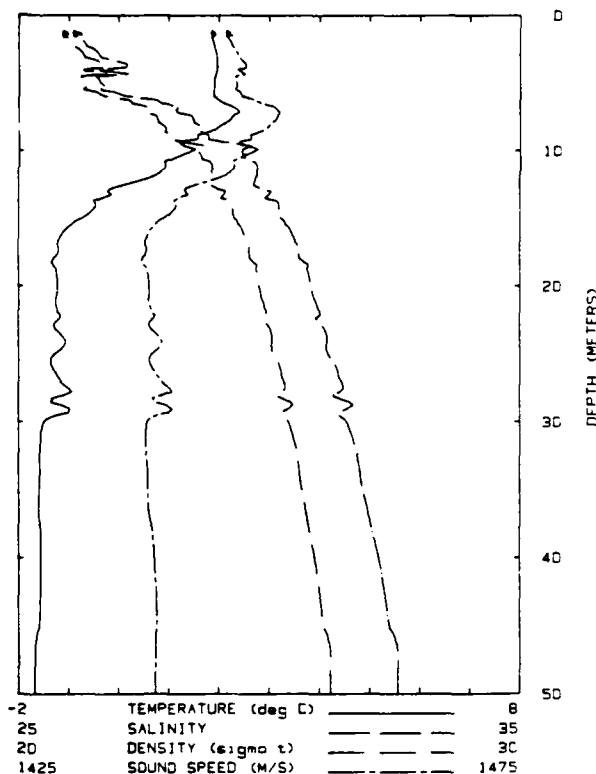


DEPTH (M) T (C) V (M/S) DENSITY S (sigma t)

5.4	2.64	1452.1	22.66	28.36
10.3	1.73	1450.0	23.34	29.16
15.3	-0.80	1440.2	24.03	29.89
20.1	-1.13	1439.0	24.63	30.62
25.2	-1.78	1441.0	25.14	31.25
30.2	-1.33	1439.2	25.48	31.66
35.1	-1.51	1438.8	25.74	31.97
40.1	-1.51	1439.0	25.87	32.13
45.3	-1.52	1439.2	25.95	32.24
50.0	-1.58	1439.3	26.12	32.44
55.1	-1.62	1439.3	26.20	32.54
60.1	-1.62	1439.3	26.20	32.54
63.0	-1.62	1439.4	26.22	32.56

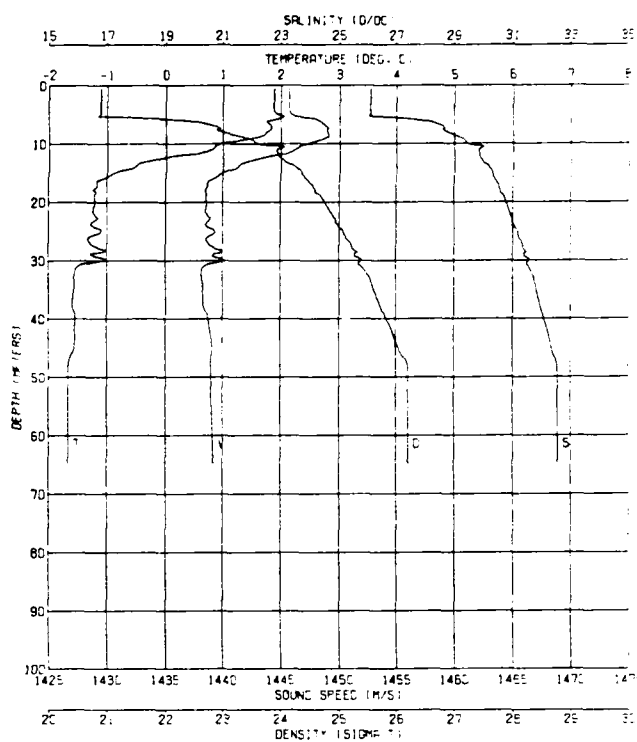
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
108	X		247	0636	Ship	71 48.9	157 16.4
109		X					

108



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.6	3.6	1.87	24.446	27.178	21.748	1447.7
8.7	8.6	1.81	25.527	28.648	22.931	1449.0
13.8	13.7	-0.49	25.009	30.166	24.252	1442.6
18.0	18.9	-1.23	24.801	30.774	24.762	1437.5
24.2	24.1	-1.05	25.317	31.149	25.060	1439.4
28.5	28.3	-1.00	25.526	31.373	25.240	1440.0
34.7	34.5	-1.59	25.418	31.842	25.633	1437.9
40.0	39.8	-1.55	25.687	32.175	25.802	1438.6
45.4	45.1	-1.59	25.832	32.408	26.092	1438.9
50.8	50.5	-1.68	25.884	32.572	26.227	1438.8

109

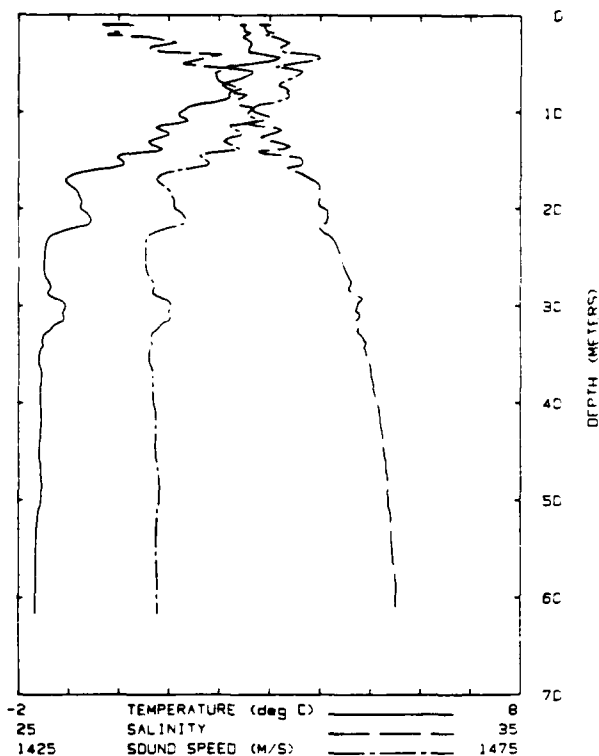


DEPTH (M) T (C) V (M/S) DENSITY S (G/CC)

5.2	2.06	1446.2	20.85	26.05
10.3	.91	1446.9	23.78	29.65
15.0	-.88	1440.0	24.35	30.28
20.4	-1.21	1438.6	24.79	30.81
25.2	-1.11	1439.3	25.08	31.16
30.3	-1.25	1439.6	25.34	31.49
35.1	-1.58	1438.3	25.62	31.81
40.1	-1.54	1438.8	25.84	32.09
45.0	-1.56	1439.1	26.05	32.35
50.2	-1.67	1439.0	26.21	32.55
55.1	-1.67	1439.1	26.21	32.55
60.3	-1.67	1439.1	26.21	32.55
64.8	-1.67	1439.2	26.22	32.57

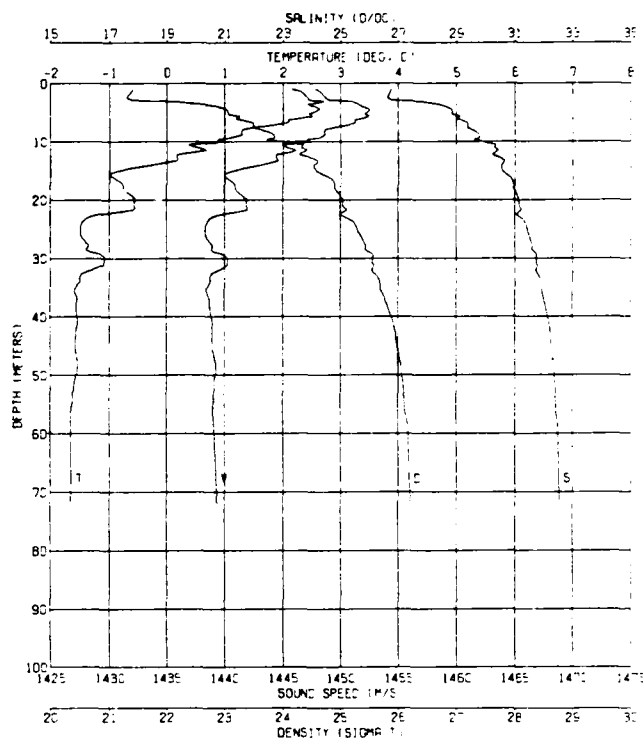
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
110	X		247	0727	Ship	71 54.7	157 22.6
111		X					

110



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	2.53	24.502	26.775	21.394	1449.8
7.3	7.3	2.08	26.213	28.248	23.393	1450.9
12.5	12.4	1.01	25.972	28.854	24.019	1447.1
17.6	17.5	-0.89	25.247	30.088	24.829	1439.4
22.8	22.7	-1.32	25.129	31.168	25.082	1439.1
28.1	28.0	-1.35	25.435	31.814	25.444	1438.7
33.5	33.4	-1.52	25.488	31.867	25.852	1438.3
38.9	38.6	-1.56	25.814	32.078	25.824	1438.5
44.2	43.9	-1.57	25.733	32.256	25.969	1438.7
49.7	49.4	-1.55	25.833	32.365	26.056	1439.1
55.1	54.8	-1.66	25.805	32.439	26.118	1438.7
60.6	60.3	-1.66	25.861	32.522	26.186	1438.9

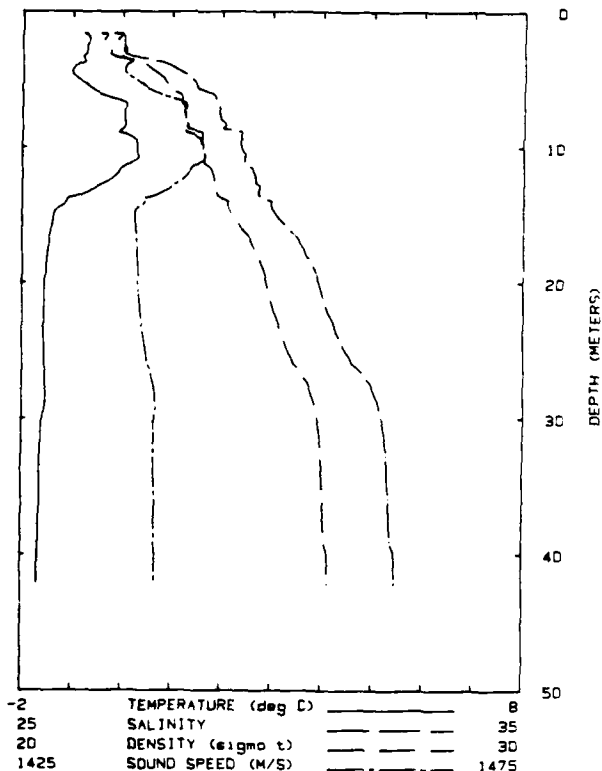
111



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	2.53	1452.3	23.02
10.1	.84	1447.4	24.07
15.1	-.80	1440.9	24.50
20.3	-.54	1442.1	25.00
25.4	-1.49	1438.5	25.26
30.1	-1.06	1440.4	25.51
35.1	-1.57	1438.6	25.65
40.1	-1.54	1439.0	25.87
45.1	-1.58	1439.0	25.97
50.2	-1.56	1439.3	26.04
55.1	-1.63	1439.1	26.10
60.2	-1.66	1439.2	26.17
65.2	-1.65	1439.2	26.18
70.3	-1.65	1439.3	26.20
72.1	-1.66	1439.4	26.21

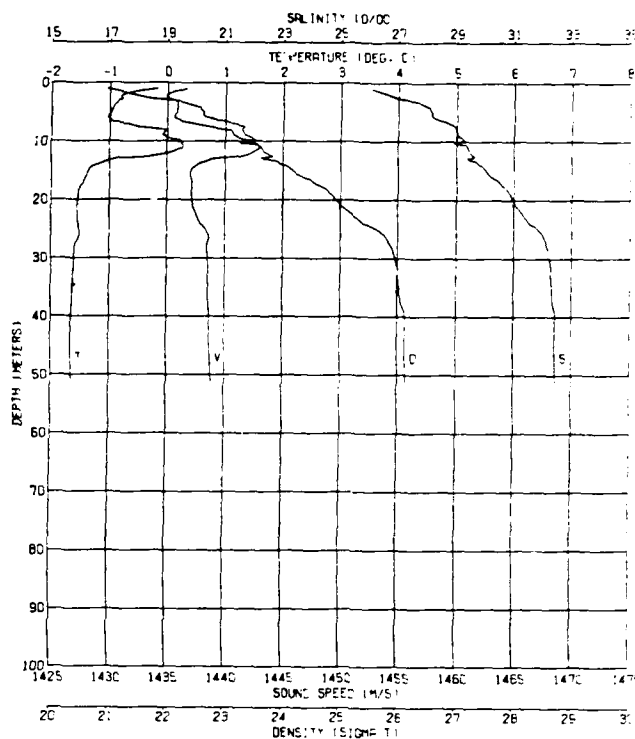
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
112	X		247	1034	Ship	71 36.2	159 9.9
113		X					

112



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.5	2.5	-0.89	22.486	27.037	21.735	1435.2
7.6	7.5	0.06	24.489	28.858	23.262	1441.4
12.5	12.4	-0.21	24.835	29.668	23.842	1441.2
17.7	17.6	-1.48	24.621	30.649	24.665	1436.6
23.2	23.0	-1.57	24.970	31.217	25.127	1437.0
28.3	28.1	-1.54	25.656	32.125	25.862	1438.5
35.4	35.2	-1.63	25.730	32.324	26.025	1438.4
41.2	41.0	-1.67	25.802	32.461	26.136	1438.5
42.4	42.1	-1.67	25.802	32.450	26.136	1438.5

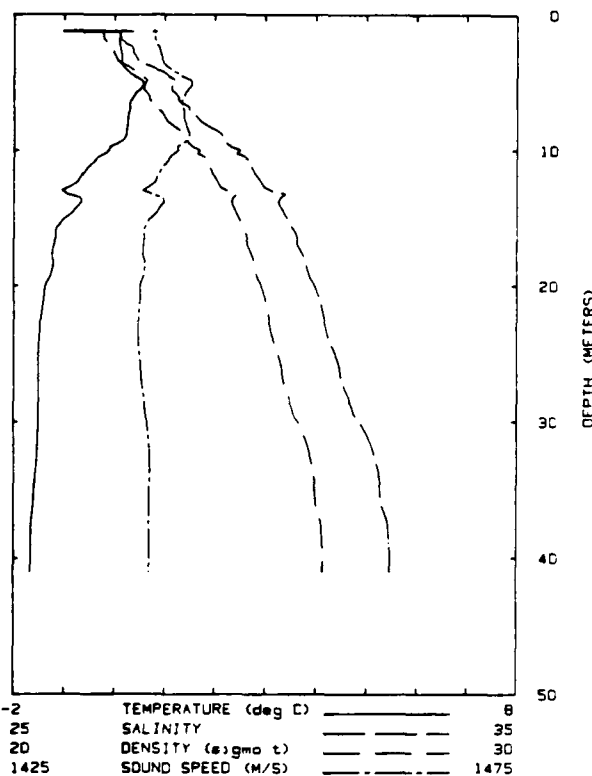
113



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.1	-0.97	1435.9	22.62
10.3	-0.26	1442.2	23.26
15.0	-1.38	1437.1	24.16
20.3	-1.55	1437.3	24.91
25.2	-1.54	1438.5	25.64
30.2	-1.62	1438.6	25.94
35.4	-1.63	1438.7	26.01
40.2	-1.67	1438.7	26.11
45.0	-1.67	1438.8	26.12
50.0	-1.67	1438.8	26.12
51.2	-1.67	1438.9	26.13

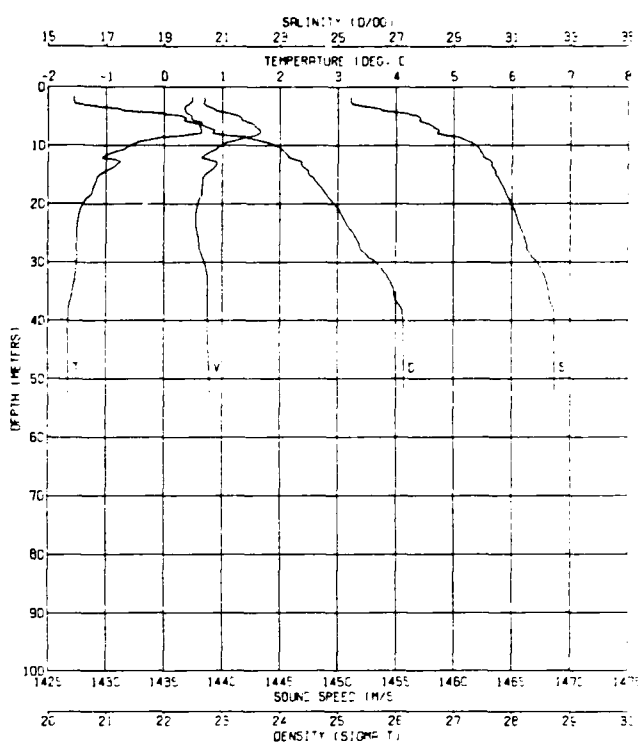
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
114	X		247	1135	Ship	71 30.5	159 3.1
115		X					

114



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	0.11	23.003	26.893	21.681	1438.9
1.3	1.3	0.11	23.052	27.062	21.737	1439.0
6.1	6.1	0.38	24.191	28.275	22.702	1442.0
11.4	11.3	-0.53	24.862	29.746	23.914	1439.6
17.1	17.0	-1.19	24.839	30.846	24.658	1437.9
22.3	22.2	-1.46	25.004	31.145	25.066	1437.4
28.4	28.2	-1.51	25.331	31.642	25.470	1437.9
34.3	34.1	-1.58	25.726	32.259	25.971	1438.5
40.3	40.1	-1.66	25.914	32.467	26.142	1438.5

115

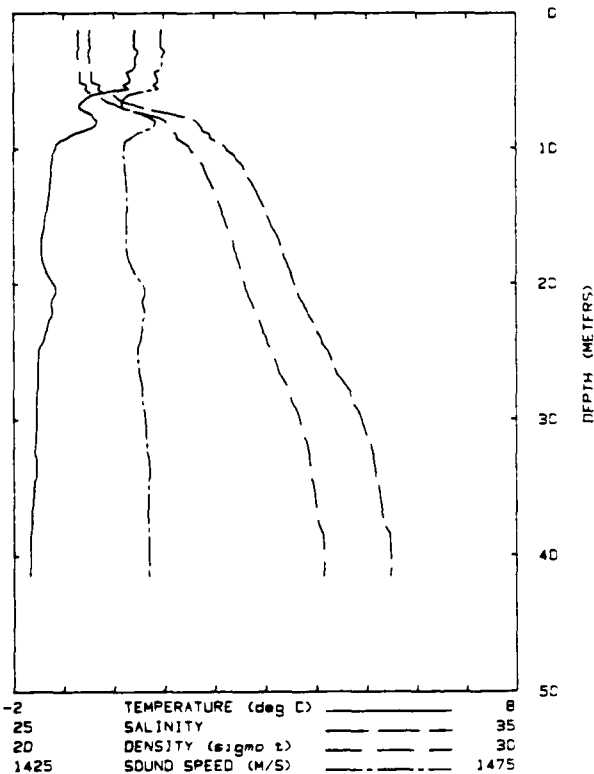


DEPTH (M) T (C) V (M/S) DENSITY S (C/00)

5.4	-.46	1441.7	22.37	27.86
10.3	-.63	1439.6	23.98	29.82
15.3	-1.14	1438.4	24.54	30.50
20.1	-1.40	1437.9	24.96	31.01
25.1	-1.50	1437.8	25.26	31.39
30.2	-1.51	1438.5	25.67	31.89
35.3	-1.59	1438.8	25.97	32.25
40.2	-1.65	1438.8	26.12	32.44
45.3	-1.65	1438.8	26.13	32.46
50.3	-1.65	1438.9	26.14	32.46
52.5	-1.65	1439.0	26.15	32.47

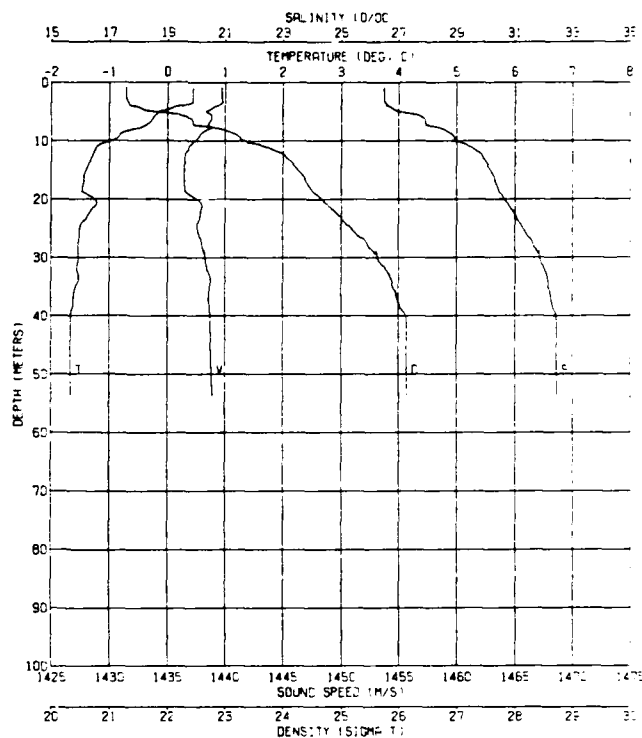
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
116	X		247	1221	Ship	71 27.1	158 57.9
117		X					

116



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.6	0.41	22.836	26.518	21.290	1439.7
6.8	6.6	-0.83	22.866	27.213	21.876	1435.8
12.0	12.0	-1.26	24.049	28.648	23.852	1436.2
17.4	17.3	-1.45	24.403	30.315	24.395	1436.3
22.8	22.7	-1.30	24.866	30.830	24.890	1437.9
29.1	29.0	-1.55	25.389	31.762	25.568	1437.9
35.2	35.0	-1.60	25.708	32.251	25.965	1438.4
41.3	41.1	-1.67	25.820	32.487	26.158	1438.5
41.7	41.5	-1.67	25.820	32.486	26.157	1438.5

117

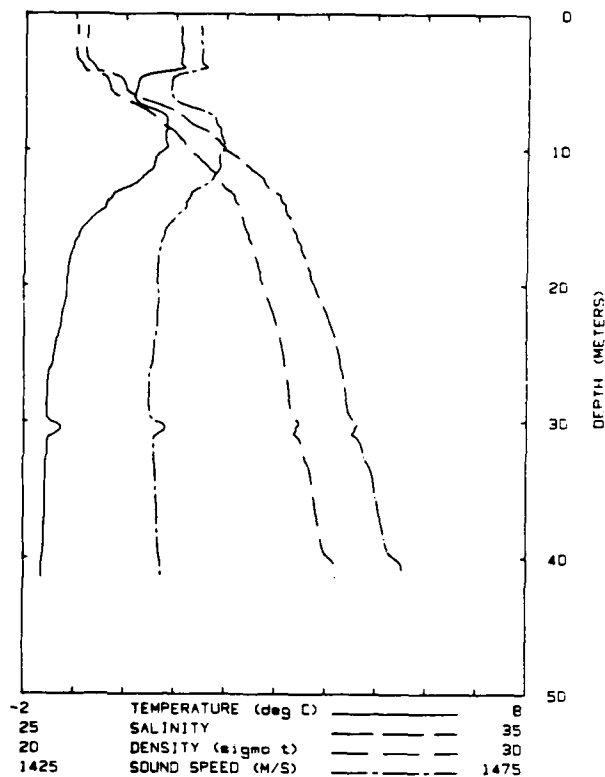


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.5	-1.19	1438.9	22.23	27.66
10.1	-2.03	1437.3	23.39	29.08
15.1	-1.40	1436.5	24.28	30.17
20.1	-1.24	1437.7	24.67	30.66
25.4	-1.51	1437.7	25.22	31.33
30.1	-1.54	1438.3	25.64	31.85
35.3	-1.58	1438.7	25.91	32.19
40.1	-1.66	1438.7	26.13	32.45
45.3	-1.67	1438.8	26.14	32.47
50.0	-1.67	1438.8	26.14	32.47
53.8	-1.67	1438.9	26.14	32.46

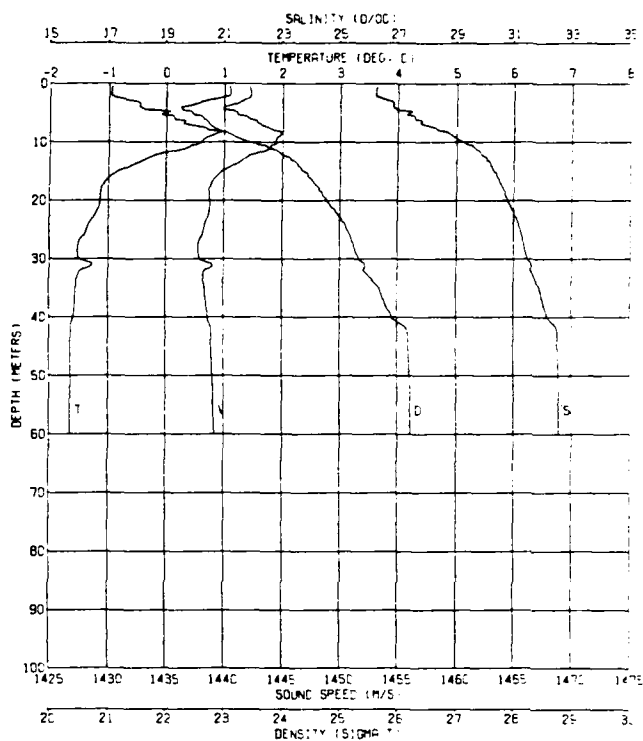
Station Number 118 ASL Cast X APL Cast X Julian Day 247 GMT hhmm 1303 Platform Ship Latitude 71 25.1 Longitude 158 55.9

118



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	1.10	23.068	28.224	21.029	1442.5
7.1	7.1	0.59	24.063	27.826	22.414	1442.4
12.1	12.0	0.36	25.287	29.701	23.847	1443.8
17.1	17.0	-1.00	24.875	30.501	24.536	1438.6
22.0	21.9	-1.22	25.077	31.001	24.945	1438.3
27.2	27.0	-1.53	25.108	31.359	25.241	1437.4
32.3	32.2	-1.55	25.371	31.737	25.548	1437.9
37.6	37.6	-1.59	25.827	32.132	25.868	1438.4

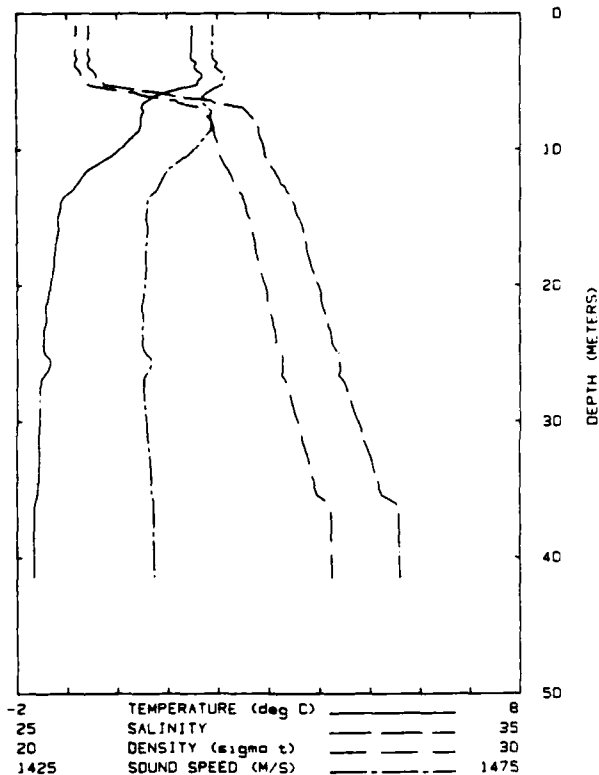
119



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	-0.47	1441.1	21.92
10.3	-0.57	1444.5	23.57
15.0	-0.85	1439.8	24.37
20.4	-1.15	1438.8	24.81
25.1	-1.38	1438.3	25.14
30.2	-1.47	1438.1	25.34
35.1	-1.56	1438.4	25.70
40.2	-1.60	1438.7	25.92
45.3	-1.65	1439.0	26.19
50.2	-1.65	1439.1	26.21
55.1	-1.65	1439.1	26.22
59.9	-1.65	1439.2	26.23

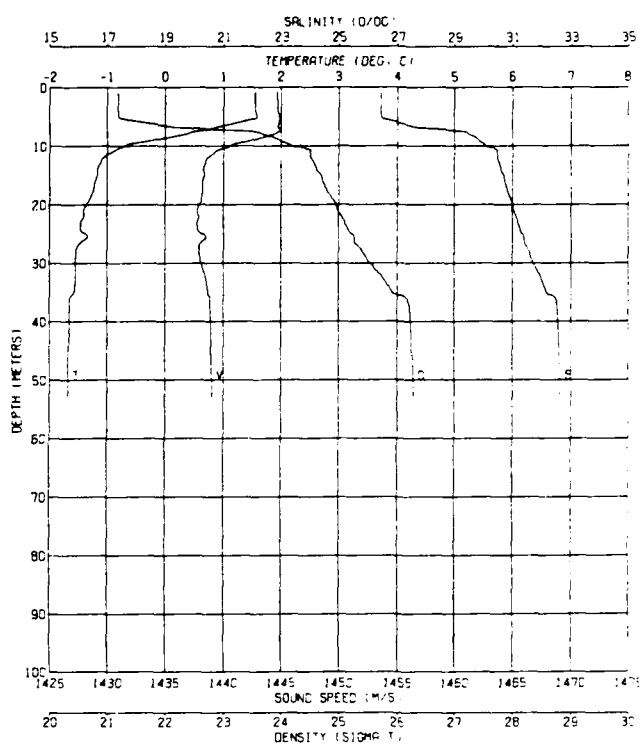
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
120	X		247	1343	Ship	71 22.2	158 53.9
121		X					

120



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	1.48	23.506	26.439	21.183	1444.5
4.5	4.5	1.70	23.778	26.584	21.287	1445.7
8.9	8.9	0.11	25.255	28.800	24.017	1442.5
15.8	15.7	-1.17	24.878	30.878	24.883	1436.1
21.9	21.8	-1.44	24.881	31.086	25.026	1437.4
28.2	28.1	-1.55	25.261	31.587	25.427	1437.7
34.5	34.3	-1.58	25.646	32.148	25.881	1438.4
40.5	40.3	-1.87	25.888	32.582	26.243	1438.7
47.7	47.4	-1.87	25.801	32.587	26.247	1438.7

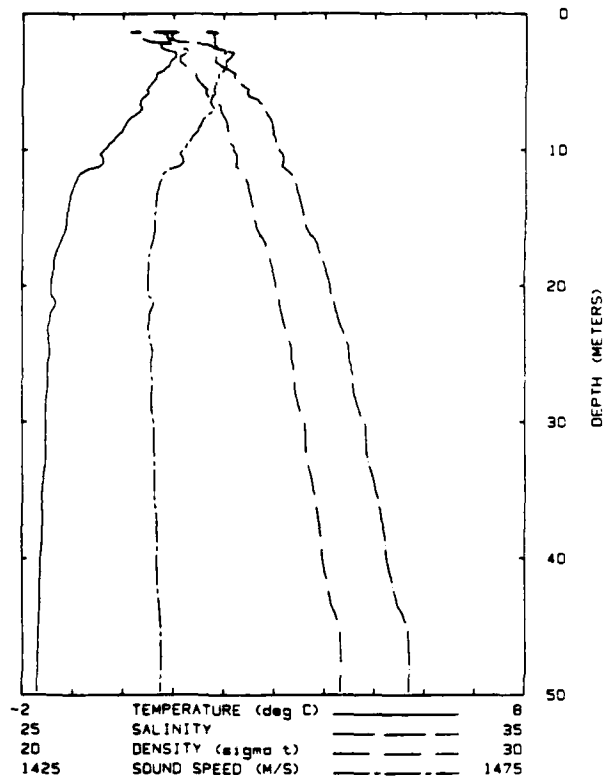
121



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	1.59	1445.0	21.22
10.1	-0.72	1440.6	24.17
15.0	-1.16	1438.5	24.67
20.1	-1.36	1438.1	24.93
25.2	-1.35	1438.5	25.26
30.1	-1.55	1438.2	25.53
35.0	-1.58	1438.7	25.89
40.2	-1.66	1438.9	26.22
45.0	-1.67	1439.0	26.25
50.2	-1.69	1439.0	26.27
52.9	-1.69	1439.1	26.29

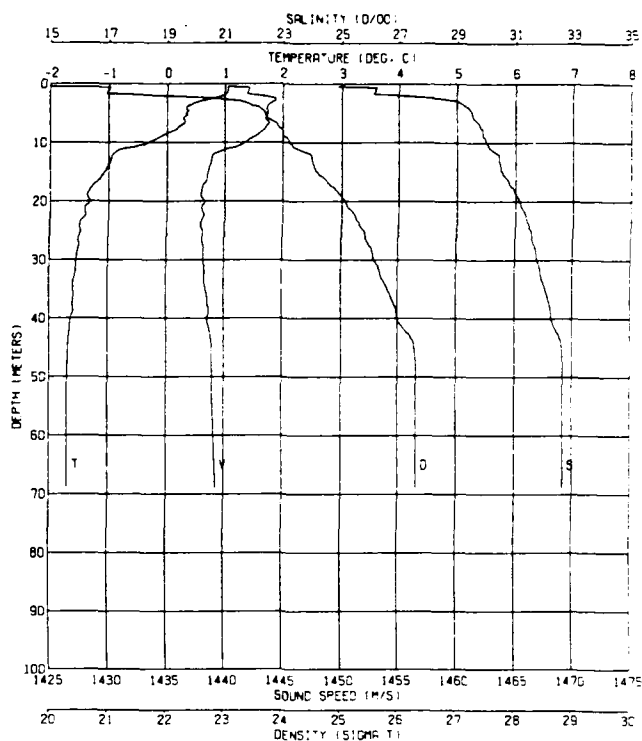
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
122	X		247	1438	Ship	71 18.8	158 49.5
123		X					

122



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	1.10	24.239	27.691	22.203	1444.4
5.0	5.0	0.52	25.225	28.468	23.653	1444.2
10.0	10.7	-0.40	25.077	30.169	24.252	1444.9
16.1	16.0	-1.15	24.885	30.672	24.677	1438.1
21.4	21.3	-1.33	25.145	31.203	25.111	1438.1
27.2	27.0	-1.49	25.299	31.574	25.417	1437.9
33.0	32.8	-1.55	25.488	31.868	25.654	1438.1
38.8	38.8	-1.80	25.692	32.228	25.946	1438.5
45.0	44.8	-1.88	25.822	32.631	26.275	1438.7
51.2	50.8	-1.71	25.852	32.889	26.330	1438.8

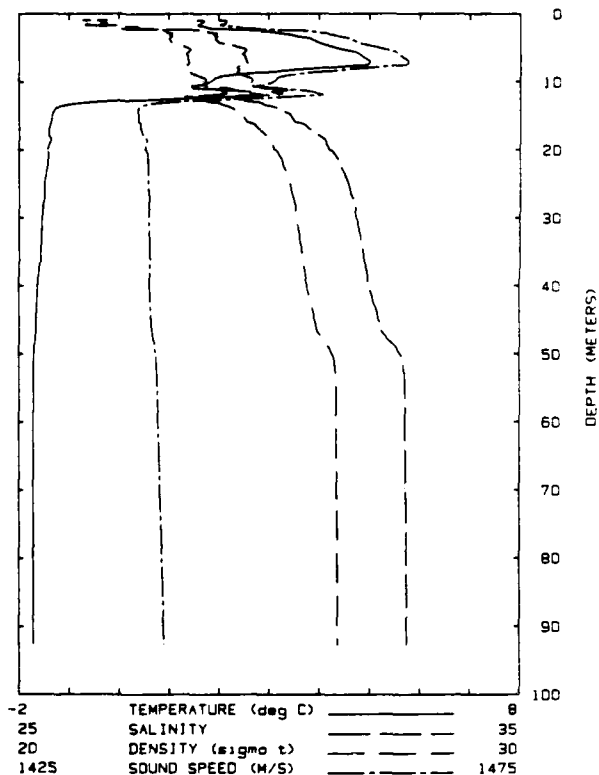
123



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	.35	1443.7	23.70
10.1	-.34	1441.6	24.14
15.0	-1.08	1438.6	24.60
20.3	-1.34	1438.2	25.07
25.2	-1.49	1438.1	25.41
30.2	-1.55	1438.2	25.59
35.0	-1.60	1438.4	25.82
40.1	-1.64	1438.6	25.99
45.1	-1.69	1439.0	26.29
50.0	-1.70	1439.0	26.31
55.1	-1.70	1439.1	26.31
60.1	-1.70	1439.1	26.31
65.1	-1.70	1439.2	26.31
69.0	-1.70	1439.3	26.31

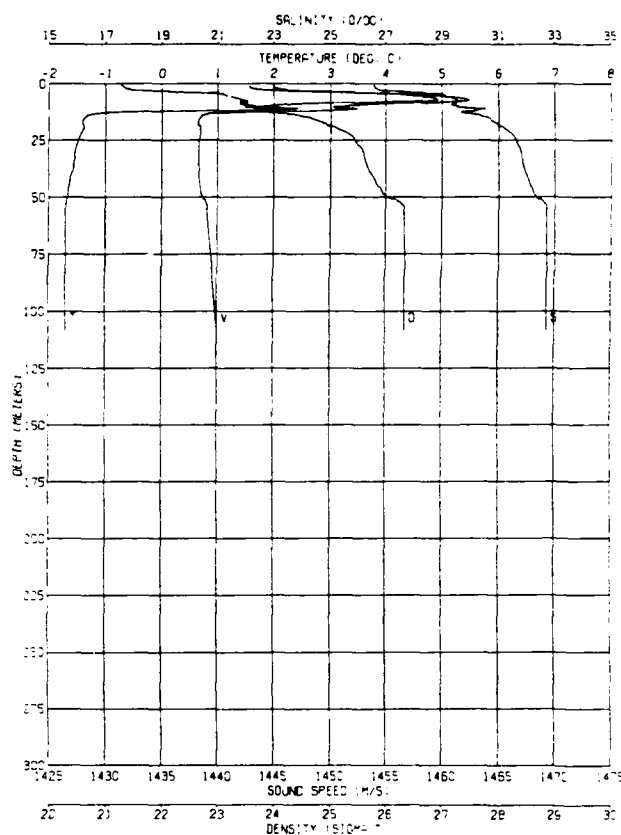
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
124	X		247	1521	Ship	71 16.2	158 47.0
125		X					

124



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	1.57	23.788	26.692	21.382	1445.2
4.9	4.9	4.29	28.010	29.380	23.323	1460.6
10.3	10.3	1.76	26.294	29.639	23.725	1450.1
15.6	15.5	-1.35	24.595	30.479	24.526	1436.9
20.8	20.7	-1.41	25.185	31.315	25.203	1437.9
26.7	26.6	-1.49	25.331	31.628	25.459	1438.0
32.4	32.2	-1.56	25.416	31.808	25.606	1438.0
38.8	38.5	-1.61	25.490	31.868	25.736	1438.0
45.3	45.0	-1.66	25.611	32.185	25.812	1438.2
51.8	51.5	-1.71	25.936	32.686	26.320	1438.8
58.4	58.0	-1.72	25.961	32.718	26.346	1438.9
64.5	64.1	-1.72	25.967	32.733	26.350	1439.0
70.9	70.4	-1.72	25.977	32.732	26.357	1439.1
77.1	71.7	-1.71	25.994	32.739	26.363	1439.1
83.9	76.9	-1.71	25.989	32.742	26.365	1439.2
89.3	83.4	-1.71	25.986	32.746	26.368	1439.4
95.3	89.6	-1.71	26.000	32.747	26.369	1439.5
100.1	92.6	-1.71	26.004	32.749	26.371	1439.5

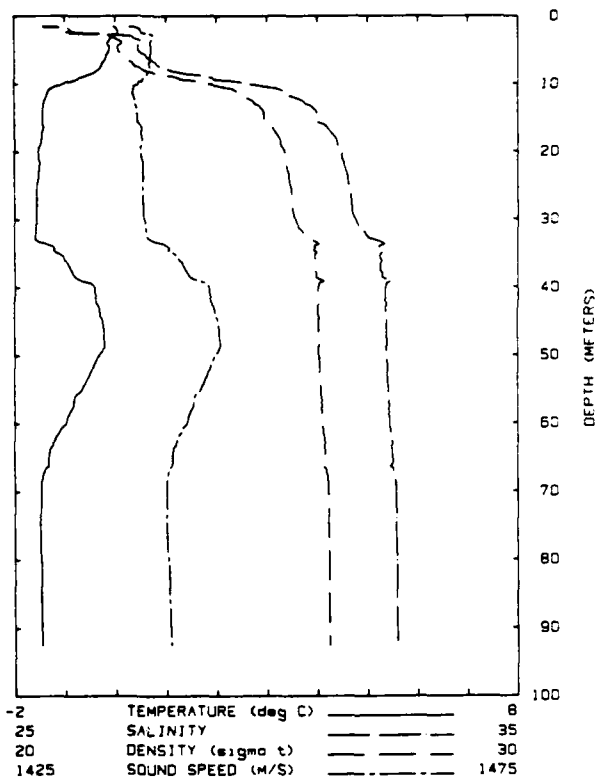
125



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	4.47	1459.6	23.16
10.1	1.75	1451.1	23.64
15.1	-1.38	1438.5	24.67
20.4	-1.41	1438.4	25.16
25.2	-1.48	1438.4	25.46
30.2	-1.54	1438.3	25.60
35.0	-1.56	1438.3	25.65
40.1	-1.61	1438.3	25.75
45.1	-1.65	1438.4	25.87
50.3	-1.68	1438.7	26.06
55.1	-1.71	1439.1	26.33
60.2	-1.71	1439.2	26.34
65.3	-1.71	1439.2	26.33
70.2	-1.71	1439.3	26.34
75.1	-1.71	1439.4	26.34
80.2	-1.70	1439.5	26.34
85.1	-1.70	1439.6	26.35
90.3	-1.70	1439.7	26.35
95.3	-1.70	1439.8	26.35
100.1	-1.70	1439.9	26.34
108.7	-1.70	1440.0	26.34

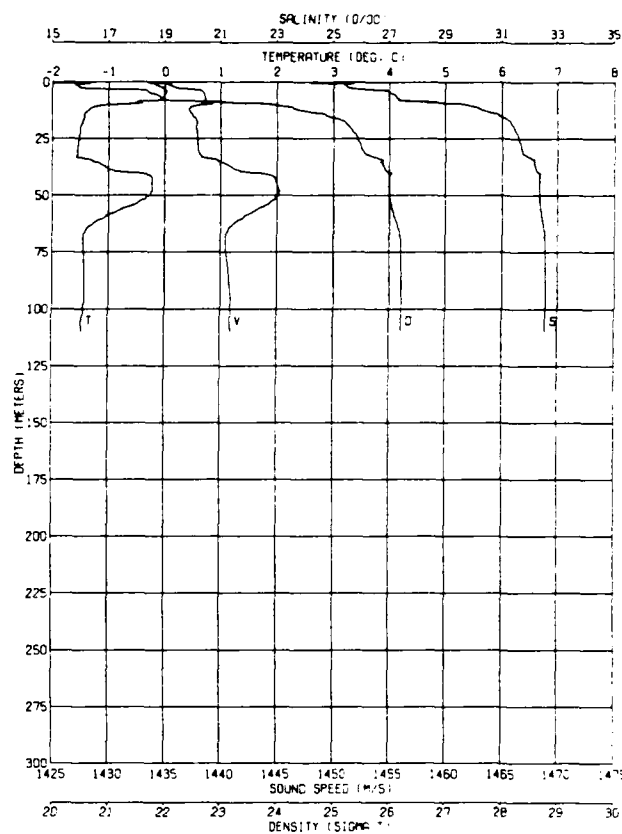
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
126	X		247	1627	Ship	71 13.6	158 43.1
127		X					

126



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.6	1.6	-0.02	21.883	25.668	20.620	1436.6
1.6	1.6	-0.02	21.847	25.628	20.588	1436.5
1.6	1.6	-0.02	21.901	25.693	20.640	1436.6
5.0	5.0	-0.12	23.187	27.441	22.048	1438.5
10.3	10.2	-1.06	24.287	29.778	23.954	1437.3
15.8	15.7	-1.45	24.914	31.013	24.960	1437.2
21.5	21.4	-1.50	25.241	31.519	25.370	1437.7
27.7	27.5	-1.56	25.322	31.684	25.505	1437.8
34.2	34.0	-1.23	25.878	32.232	25.941	1440.1
40.5	40.2	-0.41	26.721	32.351	26.010	1444.2
45.7	45.4	-0.24	26.888	32.382	26.028	1445.2
50.9	50.6	-0.37	26.780	32.389	26.039	1444.7
56.5	56.2	-0.80	26.482	32.437	26.094	1442.8
62.8	62.4	-1.20	26.191	32.470	26.133	1441.1
69.1	68.7	-1.47	26.053	32.569	26.220	1440.0
75.0	74.5	-1.49	26.049	32.582	26.230	1440.0
81.2	80.7	-1.47	26.075	32.591	26.238	1440.3
87.6	87.0	-1.47	26.083	32.587	26.242	1440.4
92.9	92.3	-1.46	26.087	32.595	26.240	1440.5
93.1	92.5	-1.47	26.088	32.597	26.242	1440.5

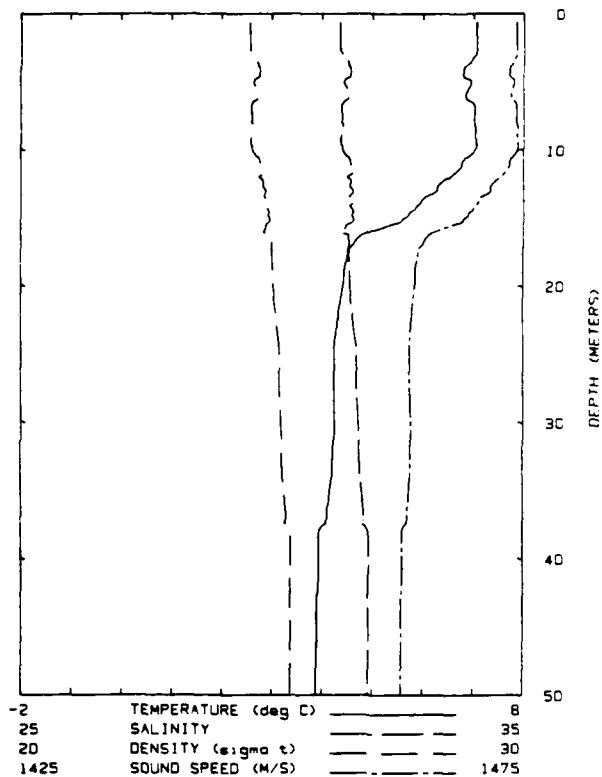
127



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	0.00	1438.6	21.85	27.19
10.5	-1.17	1437.7	24.08	29.94
15.1	-1.43	1437.5	24.89	30.93
20.3	-1.50	1437.8	25.30	31.43
25.1	-1.52	1438.0	25.43	31.59
30.3	-1.56	1438.0	25.53	31.71
35.1	-1.25	1439.9	25.85	32.12
40.2	-1.49	1443.5	26.05	32.39
45.1	-1.23	1445.1	26.01	32.35
50.2	-1.28	1445.1	26.01	32.36
55.2	-1.68	1443.7	26.04	32.38
60.2	-1.08	1442.0	26.10	32.43
65.2	-1.40	1440.6	26.17	32.51
70.0	-1.44	1440.5	26.21	32.56
75.0	-1.43	1440.5	26.22	32.56
80.1	-1.43	1440.6	26.22	32.56
85.3	-1.42	1440.7	26.22	32.56
90.2	-1.43	1440.8	26.22	32.56
95.2	-1.43	1440.9	26.22	32.56
100.2	-1.44	1440.9	26.22	32.56
110.0	-1.47	1440.9	26.23	32.58

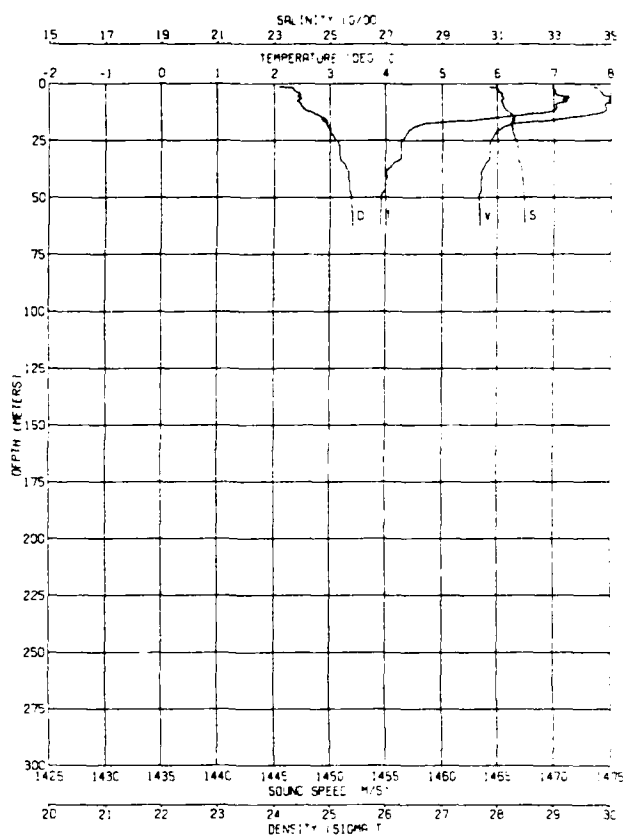
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
128	X		247	1726	Ship	71 9.0	158 38.2
129		X					

128



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.8	0.8	7.06	32.000	31.352	24.565	1474.3
4.7	4.6	6.82	32.000	31.569	24.766	1473.7
8.7	8.6	7.06	32.020	31.372	24.581	1474.4
14.7	14.6	5.74	31.142	31.821	24.941	1469.6
19.7	19.6	4.43	30.008	31.555	25.030	1464.2
24.7	24.6	4.24	29.981	31.884	25.132	1462.7
29.6	29.5	4.24	29.983	31.717	25.179	1463.8
34.7	34.5	4.17	29.999	31.787	25.241	1463.7
39.8	39.7	3.84	29.932	31.937	25.382	1463.0
44.8	44.6	3.89	29.892	31.928	25.379	1462.6
49.8	49.5	3.88	29.886	31.931	25.383	1462.6
50.8	50.5	3.87	29.881	31.933	25.385	1462.9

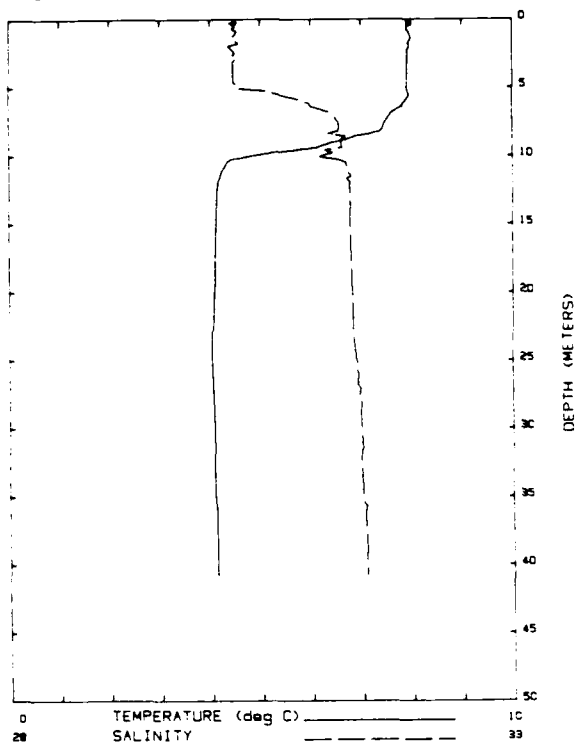
129



DEPTH (M)	T (C)	V (M/S)	DENSITY S (C/OC)
5.2	7.10	1474.5	24.46
10.4	7.05	1474.6	24.52
15.3	5.89	1471.2	24.92
20.1	4.45	1465.2	25.00
25.2	4.28	1464.4	25.14
30.1	4.28	1464.3	25.17
35.0	4.15	1463.9	25.26
40.2	4.02	1463.5	25.34
45.3	4.00	1463.5	25.35
50.2	3.93	1463.3	25.39
55.1	3.91	1463.3	25.40
60.2	3.90	1463.4	25.40
62.4	3.90	1463.4	25.42

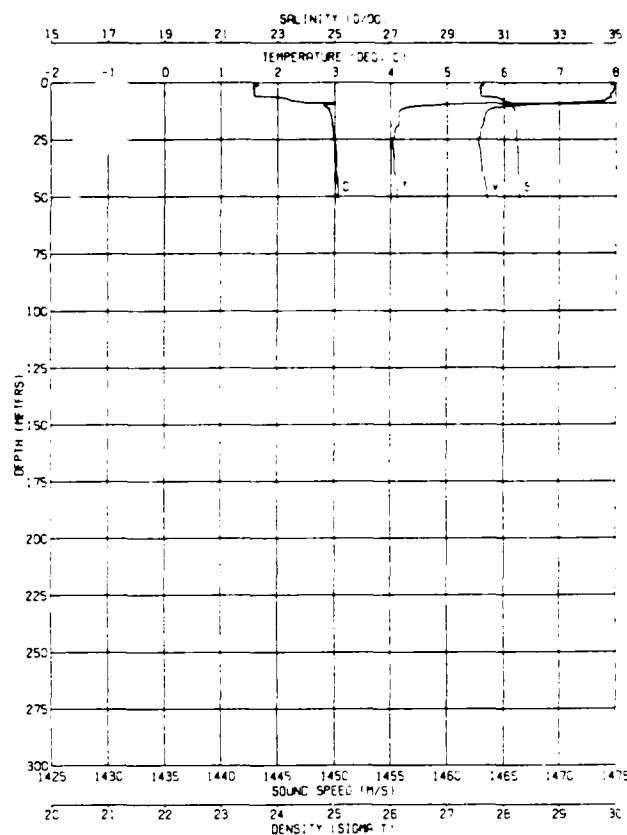
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
130	X		247	2140	Ship	70 49.2	160 13.7
131		X					

130



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.1	1.1	7.91	31.866	30.236	23.575	1476.2
4.7	4.6	7.80	31.853	30.229	23.571	1476.2
8.9	8.8	6.36	31.377	31.302	24.614	1471.6
14.9	14.9	4.12	29.608	31.392	24.933	1462.6
20.0	19.9	4.09	29.596	31.405	24.946	1462.6
25.1	25.0	4.02	29.569	31.434	24.978	1462.4
30.4	30.2	4.07	29.654	31.480	25.015	1462.8
35.5	35.3	4.08	29.680	31.501	25.023	1463.0
40.8	40.4	4.11	29.321	31.054	24.866	1462.6

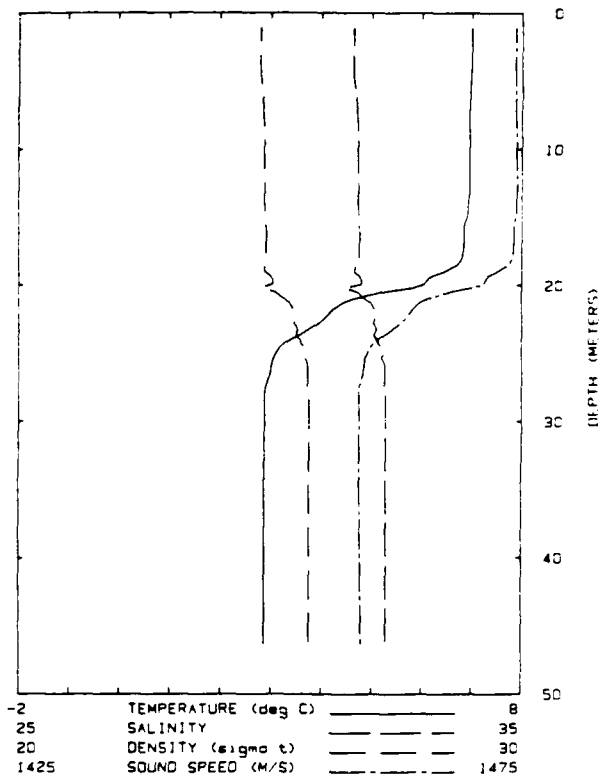
131



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.90	1476.6	23.58	30.18
10.1	4.73	1466.1	24.63	31.11
15.0	4.15	1463.5	24.87	31.32
20.3	4.08	1463.1	24.92	31.37
25.2	4.04	1462.9	24.95	31.40
30.2	4.05	1463.0	25.00	31.46
35.1	4.06	1463.0	25.01	31.47
40.1	4.08	1463.2	25.03	31.50
45.0	4.10	1463.4	25.04	31.52
50.0	4.11	1463.5	25.05	31.52
51.2	4.11	1463.6	25.07	31.55

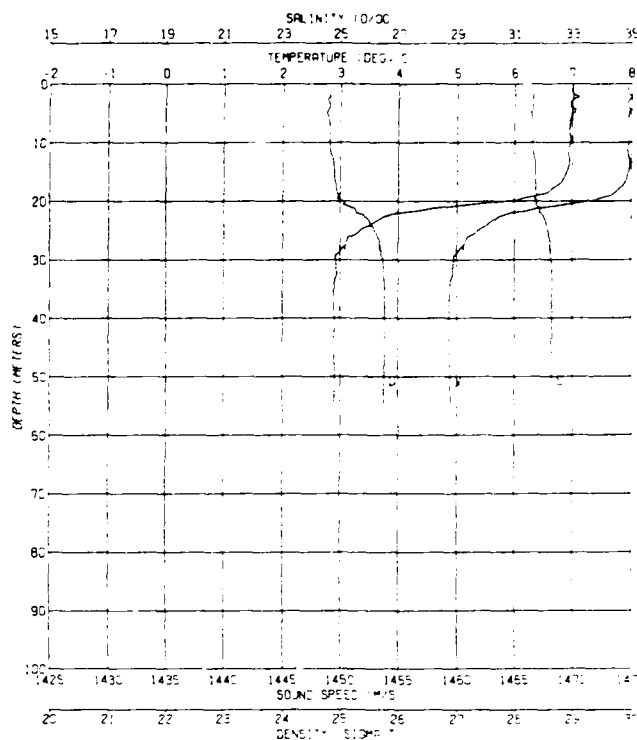
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
132	X		247	2236	Ship	70 55.4	160 18.9
133		X					

132



PRESSURE DBAR	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	6.99	32.195	31.628	24.792	1474.3
1.2	1.2	6.99	32.195	31.629	24.792	1474.3
2.5	2.5	6.99	32.191	31.625	24.789	1474.3
8.8	8.7	6.96	32.203	31.727	24.873	1474.5
14.7	14.6	6.92	32.254	31.750	24.896	1474.4
20.6	20.5	5.22	30.819	31.737	25.091	1467.7
26.0	25.8	5.02	29.440	32.267	25.728	1459.3
31	31.3	2.87	29.345	32.292	25.760	1458.8
36.7	36.5	2.87	29.347	32.293	25.761	1458.8
41.8	41.6	2.87	29.349	32.293	25.761	1458.8
46.3	46.0	2.87	29.353	32.294	25.762	1459.0
48.5	48.3	2.87	29.355	32.297	25.764	1459.1

133

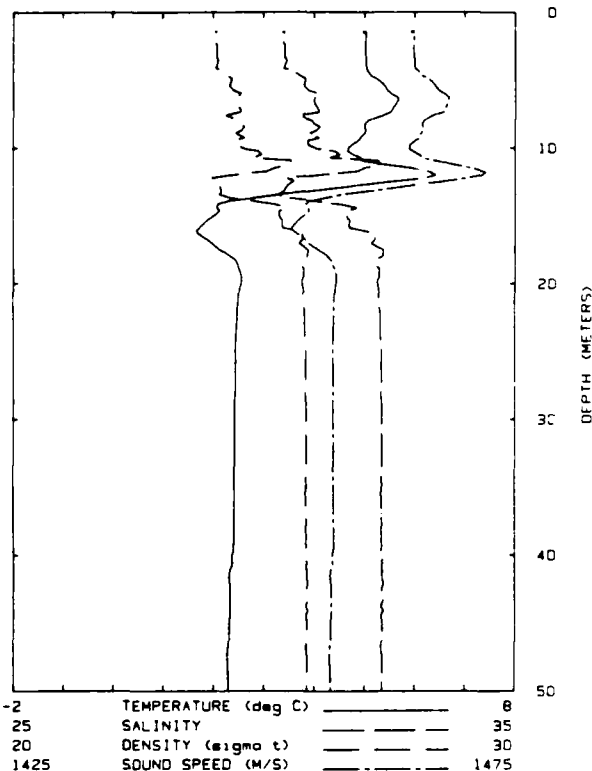


DEPTH (M) T (C) V (M/S) DENSITY S (G/CC)

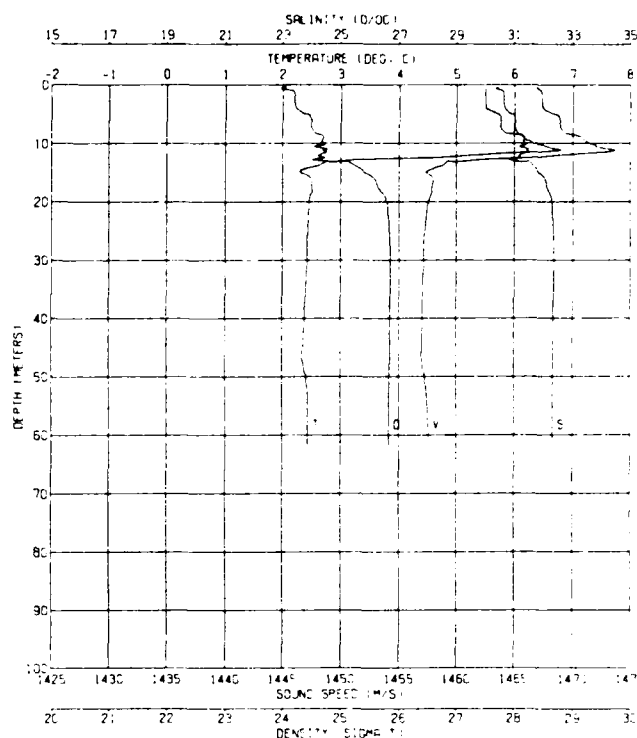
5.1	7.04	1474.9	24.77	31.56
10.1	6.97	1474.8	24.82	31.62
15.3	6.90	1474.7	24.90	31.71
20.1	5.90	1471.5	25.02	31.74
25.2	3.33	1462.0	25.52	32.07
30.2	2.93	1460.0	25.67	32.20
35.1	2.90	1459.6	25.70	32.22
40.2	2.91	1459.5	25.72	32.25
45.1	2.90	1459.4	25.74	32.26
50.0	2.91	1459.5	25.74	32.27
54.7	2.90	1459.5	25.75	32.28

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
134	X		247	2313	Ship	70 57.5	160 24.3
135		X					

134



135

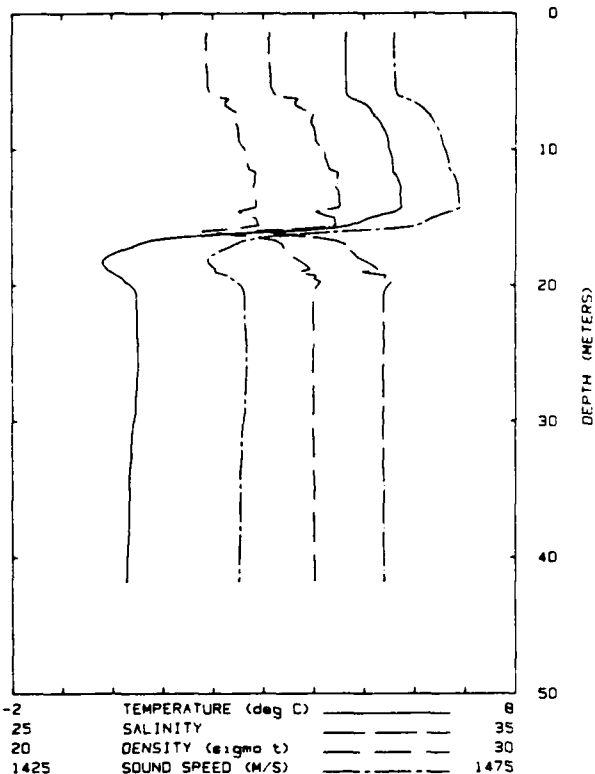


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	5.01	28.462	30.402	24.060	1464.8
1.5	1.5	5.02	28.481	30.410	24.065	1464.9
5.5	5.5	5.41	30.136	30.786	24.327	1467.1
11.0	11.0	4.86	31.080	32.287	25.554	1467.2
16.2	16.1	1.88	28.097	31.867	25.581	1452.9
21.1	21.0	2.51	28.037	32.289	25.788	1457.0
26.1	26.0	2.44	28.027	32.339	25.832	1458.9
31.2	31.0	2.42	28.017	32.346	25.840	1458.9
36.1	35.9	2.42	28.018	32.341	25.838	1458.9
40.4	40.1	2.37	28.886	32.387	25.861	1458.6
41.9	41.7	2.31	28.840	32.358	25.858	1458.6
45.4	45.1	2.31	28.840	32.357	25.857	1458.6
48.8	48.6	2.30	28.834	32.360	25.861	1458.6
50.8	50.5	2.28	28.830	32.368	25.866	1458.6
50.7	50.4	2.31	28.850	32.368	25.867	1458.7

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/CO)
5.1	5.74	1468.7	24.47	30.99
10.3	6.47	1471.9	24.74	31.42
15.3	2.38	1457.5	25.48	31.92
20.1	2.45	1457.5	25.80	32.30
25.1	2.44	1457.2	25.84	32.34
30.1	2.43	1457.1	25.85	32.36
35.3	2.40	1457.0	25.85	32.36
40.3	2.39	1457.1	25.85	32.35
45.1	2.36	1457.0	25.85	32.35
50.3	2.41	1457.3	25.84	32.34
55.2	2.44	1457.5	25.83	32.33
60.1	2.44	1457.5	25.83	32.33
61.7	2.44	1457.6	25.83	32.34

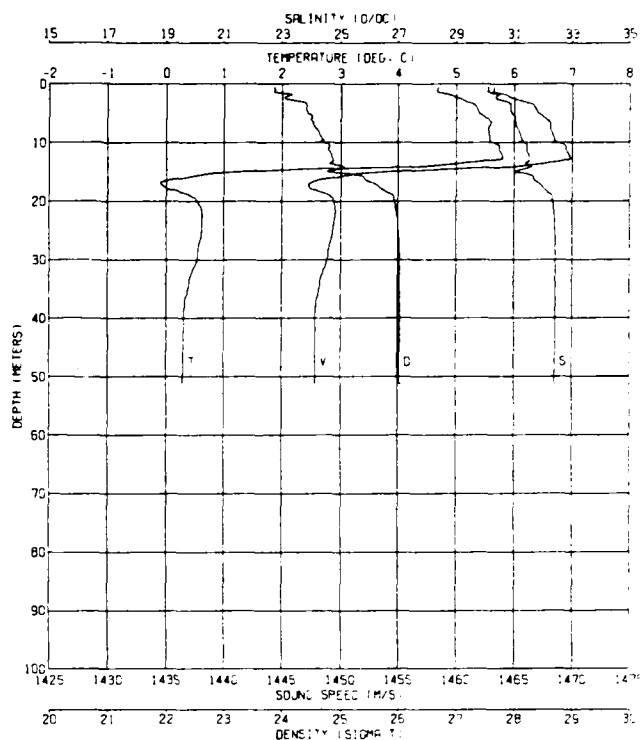
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
136	X		248	0012	Ship	71 0.6	160 27.1
137		X					

136



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.0	2.0	4.84	28.920	30.113	23.869	1463.0
6.6	6.6	4.84	29.617	30.632	24.248	1465.0
11.8	11.7	5.58	30.893	31.487	24.853	1468.7
17.1	17.0	0.55	26.926	31.629	25.387	1447.3
22.0	21.8	0.50	27.472	32.386	25.997	1448.2
27.1	26.9	0.49	27.474	32.386	25.998	1448.3
32.2	32.0	0.38	27.392	32.393	26.008	1447.9
37.3	37.1	0.34	27.361	32.399	26.015	1447.7
41.8	41.6	0.29	27.329	32.405	26.023	1447.6
42.0	41.7	0.30	27.325	32.392	26.012	1447.6

137

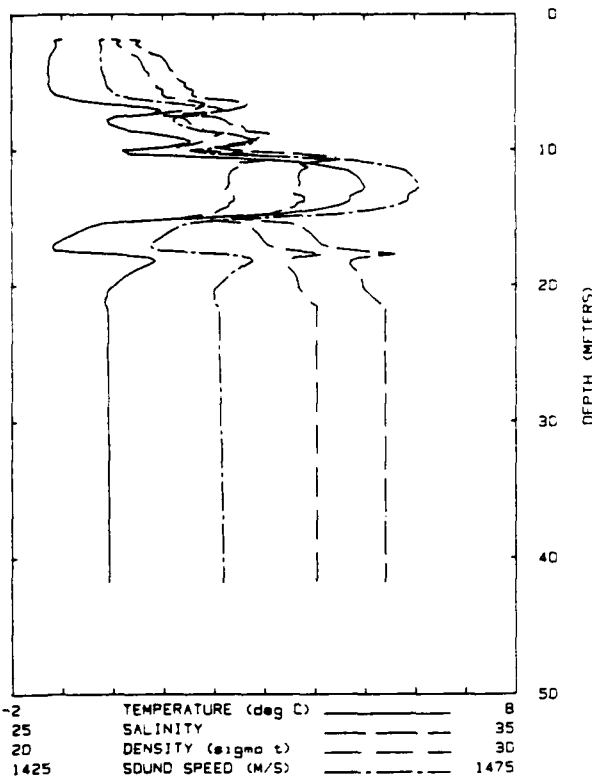


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	5.42	1467.2	24.53	31.02
10.1	5.65	1469.0	24.82	31.43
15.0	2.95	1458.6	23.54	29.58
20.1	.55	1449.9	25.81	32.18
25.1	.62	1449.7	25.91	32.30
30.3	.54	1449.1	25.95	32.33
35.3	.38	1448.4	25.98	32.36
40.2	.31	1448.0	26.00	32.38
45.0	.30	1448.0	26.02	32.40
50.2	.29	1448.0	26.01	32.39
51.2	.29	1448.0	26.05	32.44

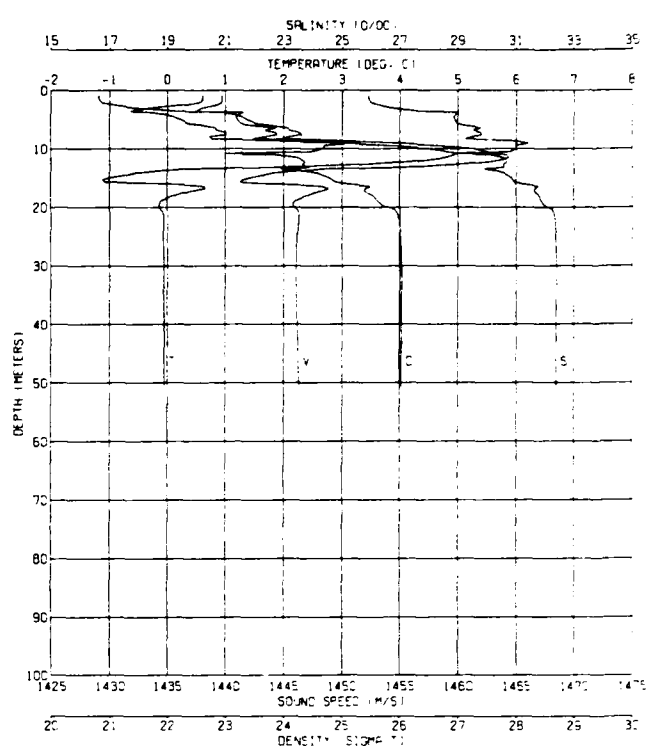
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
138	X		248	0054	Ship	71 3.2	160 29.5
139		X					

138



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.9	1.9	-1.14	22.586	27.547	22.154	1433.8
4.9	4.9	-1.24	23.077	28.329	22.786	1434.4
10.1	10.1	0.20	24.953	29.421	23.829	1442.7
15.3	15.3	0.60	25.680	29.850	24.036	1445.3
20.5	20.4	-0.07	26.732	32.015	25.726	1445.1
25.5	25.4	-0.08	27.017	32.412	26.046	1445.6
30.7	30.5	-0.08	27.029	32.414	26.047	1445.7
35.9	35.7	-0.07	27.036	32.409	26.043	1445.8
41.1	40.9	-0.07	27.045	32.412	26.045	1445.9
42.0	41.8	-0.07	27.043	32.410	26.043	1446.0

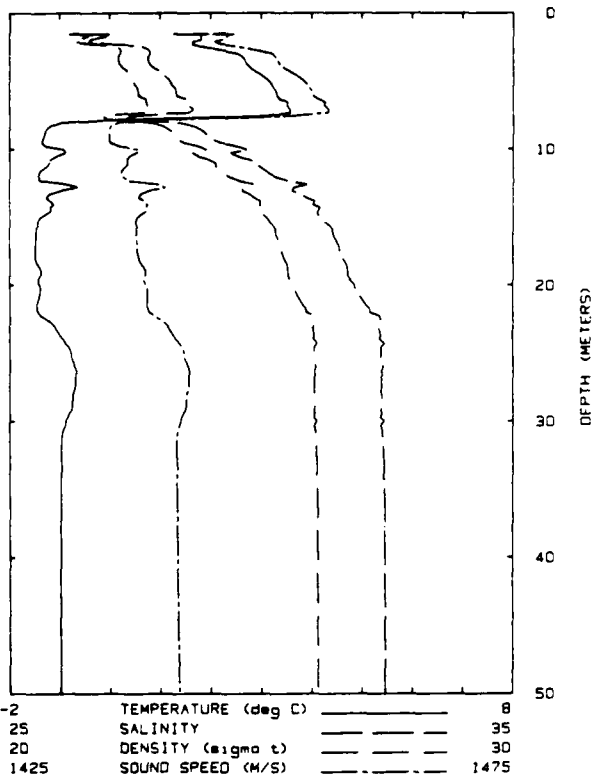
139



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	.22	1442.0	23.23	28.93
10.1	4.62	1461.7	24.66	31.02
15.3	-1.11	1441.6	24.82	30.86
20.1	-1.14	1446.2	25.77	32.08
25.2	-0.07	1446.3	25.94	32.29
30.1	-0.06	1446.2	25.98	32.34
35.1	-0.06	1446.2	26.01	32.37
40.1	-0.06	1446.2	26.01	32.37
45.1	-0.06	1446.2	26.02	32.38
50.0	-0.05	1446.3	26.02	32.38
50.8	-0.05	1446.3	26.04	32.40

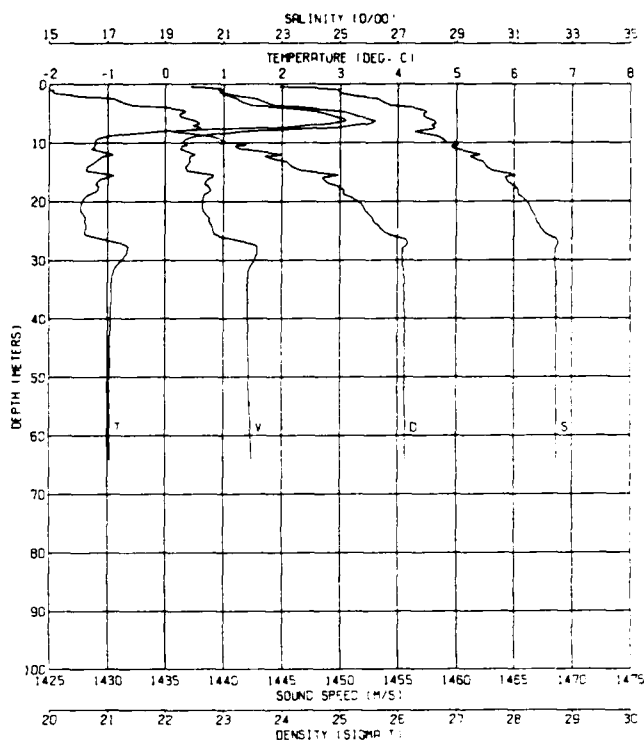
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
140	X		248	0137	Ship	71 5.9	160 32.7
141		X					

140



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.6	1.6	1.82	24.154	26.952	21.576	1446.7
1.7	1.7	1.82	24.140	26.936	21.564	1446.7
6.4	6.4	3.37	26.587	28.531	22.730	1455.6
11.7	11.6	-1.38	24.288	30.098	24.218	1436.2
17.0	16.9	-1.48	25.259	31.521	25.371	1437.7
22.4	22.3	-1.39	25.949	32.362	26.050	1439.4
28.4	28.2	-0.74	26.497	32.409	26.069	1442.6
34.2	34.1	-0.97	26.348	32.449	26.109	1441.7
40.4	40.2	-0.98	26.352	32.465	26.122	1441.7
46.6	46.3	-0.98	26.361	32.472	26.127	1441.9
52.5	52.2	-0.98	26.365	32.473	26.129	1442.0
52.5	52.2	-0.98	26.369	32.477	26.132	1442.0

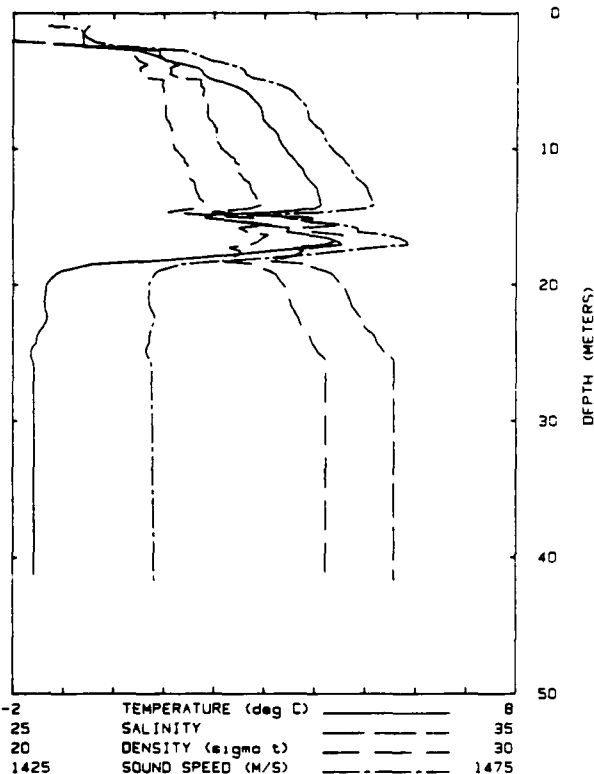
141



DEPTH (M)	T (C)	V (M/S)	DENSITY S (C/00)
5.1	2.78	1450.9	22.27
10.4	-1.23	1437.0	23.36
15.5	-1.21	1438.8	25.06
20.4	-1.46	1438.4	25.33
25.2	-1.41	1439.2	25.74
30.2	-0.75	1442.6	26.09
35.3	-0.93	1442.0	26.12
40.1	-0.95	1442.0	26.12
45.1	-0.96	1442.1	26.12
50.0	-0.98	1442.1	26.11
55.1	-0.97	1442.2	26.12
60.1	-0.97	1442.3	26.12
64.2	-0.96	1442.4	26.12

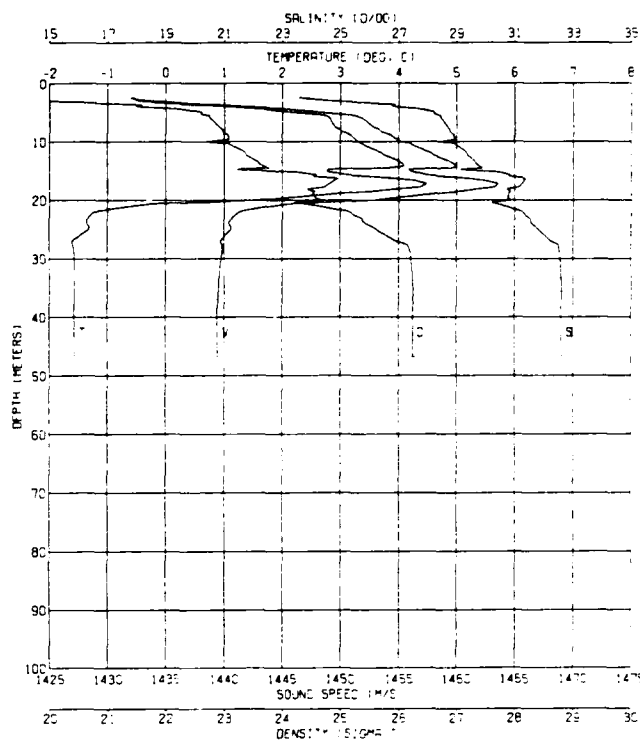
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
142	X		248	0244	Ship	71 8.9	160 36.5
143		X					

142



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	-0.52	18.795	22.105	17.761	1429.4
5.6	5.6	2.55	26.199	28.602	23.006	1452.4
10.8	10.8	3.59	27.509	29.423	23.420	1457.8
15.9	15.9	3.51	28.582	30.774	24.499	1459.3
21.1	21.0	-1.37	25.463	31.676	25.495	1438.6
26.3	26.1	-1.58	25.848	32.572	26.225	1438.8
31.7	31.6	-1.58	25.856	32.575	26.227	1438.9
37.5	37.3	-1.58	25.858	32.576	26.227	1439.0
41.8	41.6	-1.58	25.867	32.583	26.233	1439.1
41.8	41.7	-1.57	25.868	32.581	26.232	1439.1

143

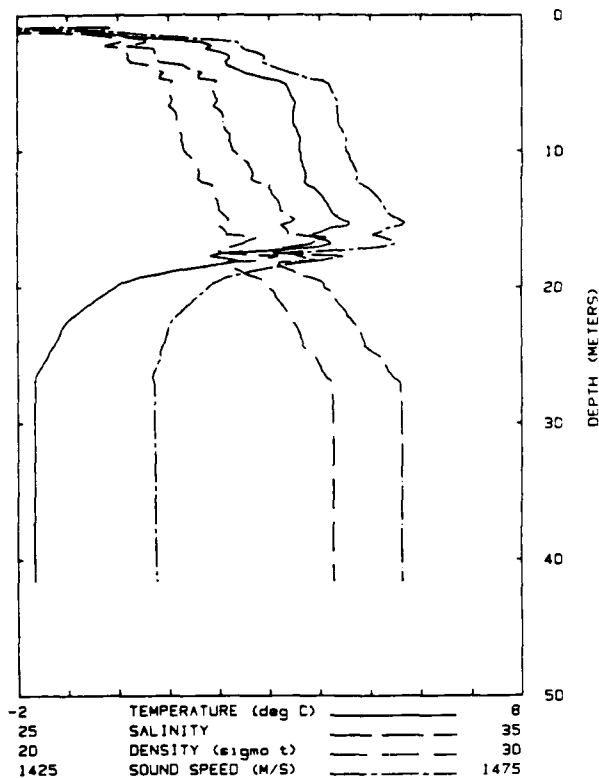


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	2.39	1449.4	22.68	28.34
10.3	3.32	1455.7	23.13	29.01
15.1	2.61	1456.1	24.24	30.38
20.4	1.06	1449.7	23.98	29.94
25.1	-1.32	1440.9	25.52	31.72
30.3	-1.57	1440.1	26.11	32.44
35.1	-1.57	1439.8	26.17	32.51
40.2	-1.57	1439.6	26.19	32.53
45.1	-1.57	1439.6	26.21	32.55
46.8	-1.57	1439.6	26.25	32.61

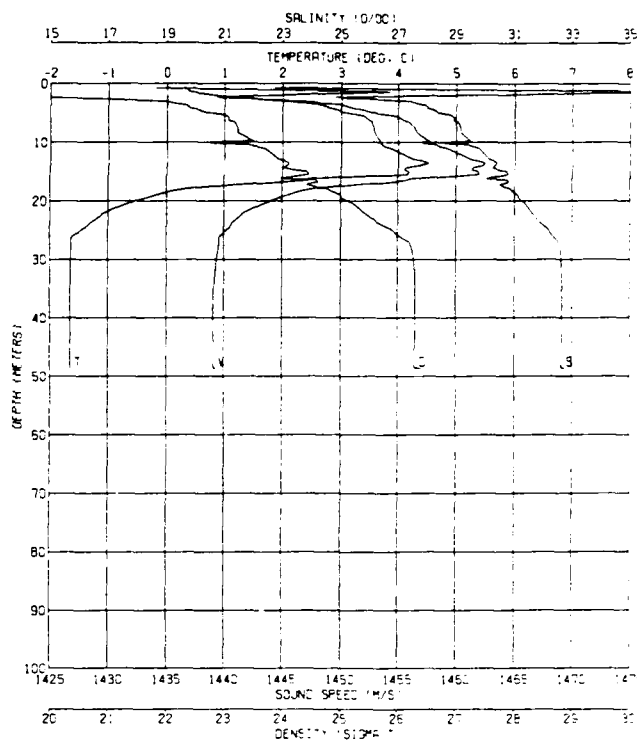
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
144	X		248	0345	Ship	71 11.6	160 39.8
145		X					

144



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	-0.28	14.543	18.600	13.329	1423.2
4.8	4.8	3.18	26.805	28.959	23.084	1455.3
8.8	8.7	3.60	27.382	29.243	23.276	1457.6
14.7	14.6	4.26	28.800	30.316	24.067	1461.8
19.4	19.3	0.43	28.213	30.825	24.746	1445.8
24.4	24.3	-1.28	25.717	31.909	25.680	1439.4
30.0	29.8	-1.66	25.930	32.634	26.277	1438.6
35.7	35.5	-1.88	25.932	32.835	26.277	1438.7
41.6	41.3	-1.66	25.935	32.636	26.278	1438.8
41.8	41.6	-1.88	25.942	32.641	26.282	1438.8

145

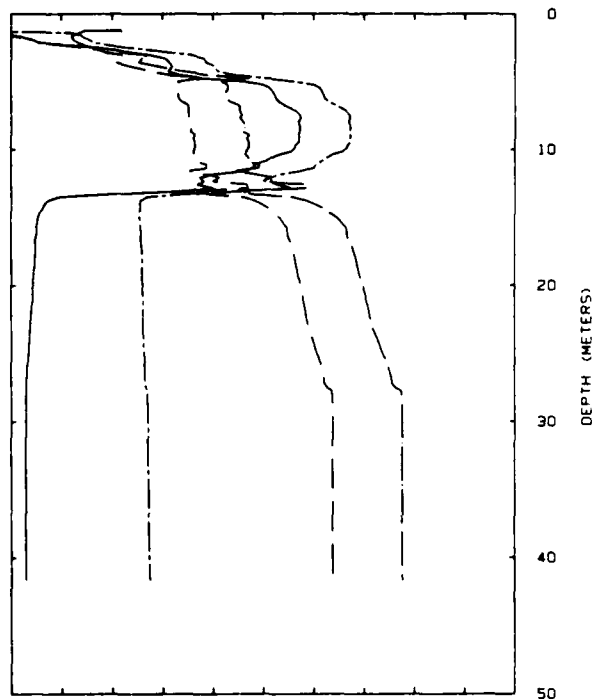


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	3.17	1453.6	23.05	28.88
10.4	3.71	1458.0	23.45	29.45
15.0	4.12	1461.6	24.49	30.81
20.3	-1.57	1444.1	25.12	31.26
25.2	-1.48	1440.6	25.82	32.08
30.1	-1.65	1439.7	26.17	32.51
35.0	-1.66	1439.4	26.23	32.58
40.3	-1.66	1439.3	26.25	32.61
45.1	-1.66	1439.2	26.26	32.62
48.6	-1.66	1439.3	26.31	32.68

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
146	X		248	0541	Ship	71 17.0	160 47.7
147		X					

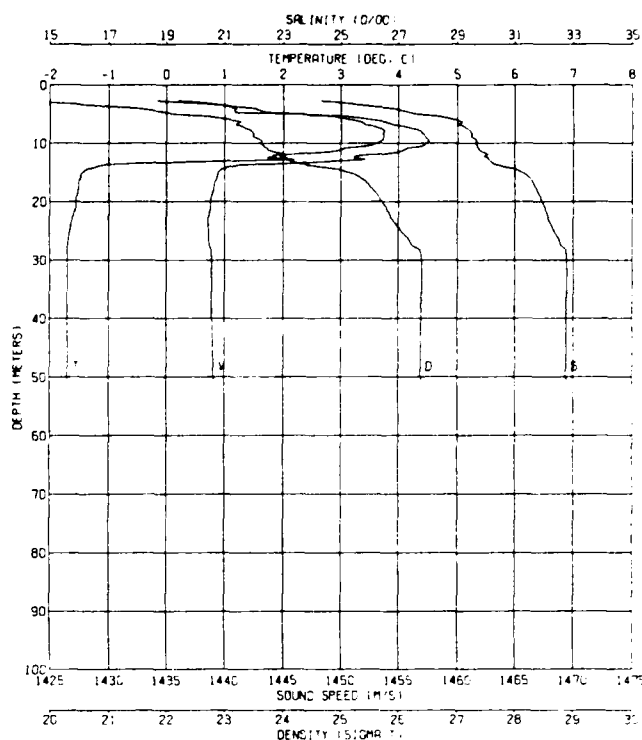
146



-2	TEMPERATURE (deg C)	8
25	SALINITY	35
20	DENSITY (sigma t)	30
1425	SOUND SPEED (M/S)	1475

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	0.01	5.798	6.112	4.871	1410.6
1.3	1.3	-0.31	8.833	11.010	8.819	1415.6
2.4	2.4	-0.49	22.139	26.403	21.221	1435.3
7.7	7.7	3.75	27.731	28.541	23.500	1458.6
12.9	12.9	2.01	27.498	30.887	24.705	1452.9
18.0	17.9	-1.53	25.446	31.829	25.822	1437.9
23.4	23.3	-1.83	25.632	32.194	25.919	1438.0
28.4	28.2	-1.71	25.981	32.759	26.379	1438.5
35.0	34.6	-1.71	25.983	32.758	26.378	1438.6
40.8	40.3	-1.71	25.986	32.759	26.379	1438.7
41.8	41.6	-1.71	25.994	32.766	26.384	1438.7

147

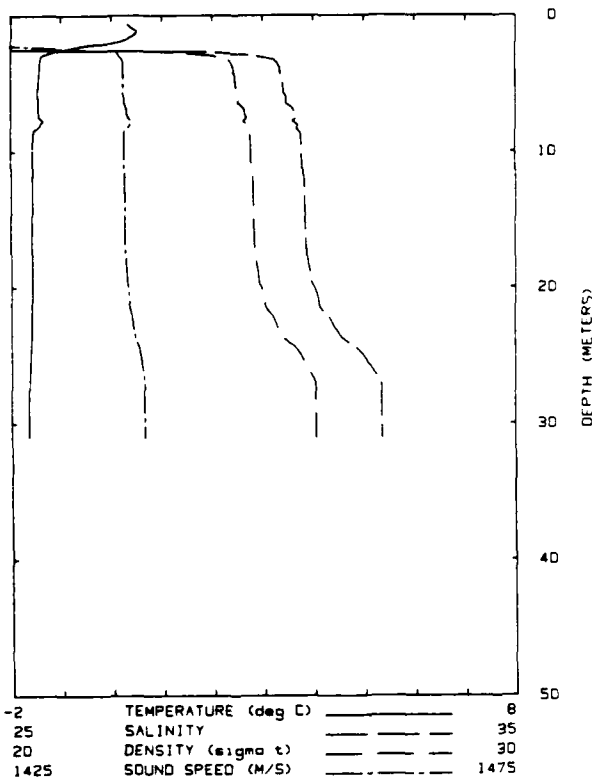


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/00)
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5.4	2.88	1450.5	22.70	28.39
10.4	3.52	1457.3	23.67	29.70
15.1	-1.47	1439.4	25.20	31.32
20.4	-1.56	1438.8	25.73	31.97
25.2	-1.66	1438.6	26.06	32.37
30.2	-1.70	1438.9	26.40	32.79
35.1	-1.70	1438.9	26.40	32.78
40.1	-1.70	1438.9	26.39	32.77
45.0	-1.70	1439.0	26.39	32.77
50.0	-1.70	1439.1	26.40	32.78
50.6	-1.70	1439.1	26.40	32.79

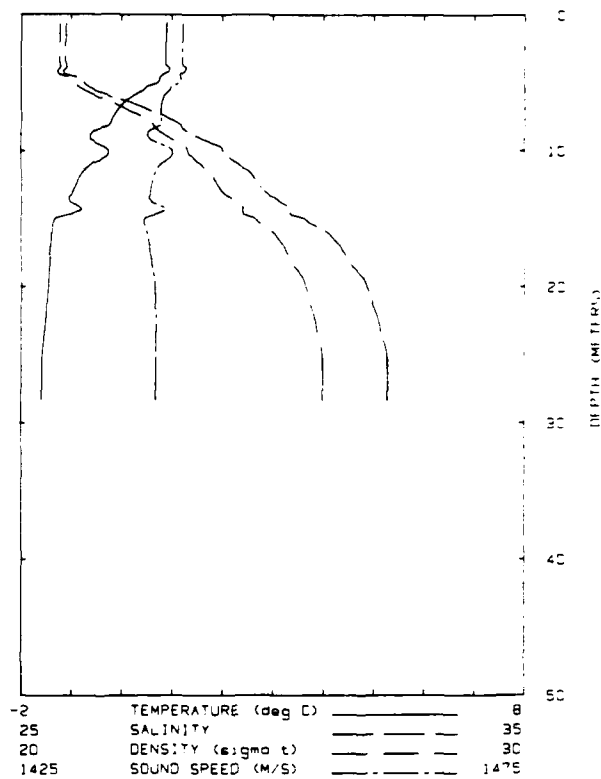
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
148	X		248	1848	Ship	71 50.5	161 13.5
149	X		249	2338	Ship	72 0.0	160 0.0

148



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.7	2.7	-1.16	23.828	28.862	23.321	1435.6
8.3	8.3	-1.45	24.856	30.664	24.677	1436.6
13.6	13.5	-1.57	24.879	30.825	24.810	1436.3
18.7	18.6	-1.59	24.742	30.922	24.889	1436.4
24.2	24.0	-1.61	25.275	31.675	25.499	1437.4
30.5	30.3	-1.65	25.733	32.353	26.049	1438.2
31.2	31.0	-1.65	25.736	32.355	26.050	1438.3

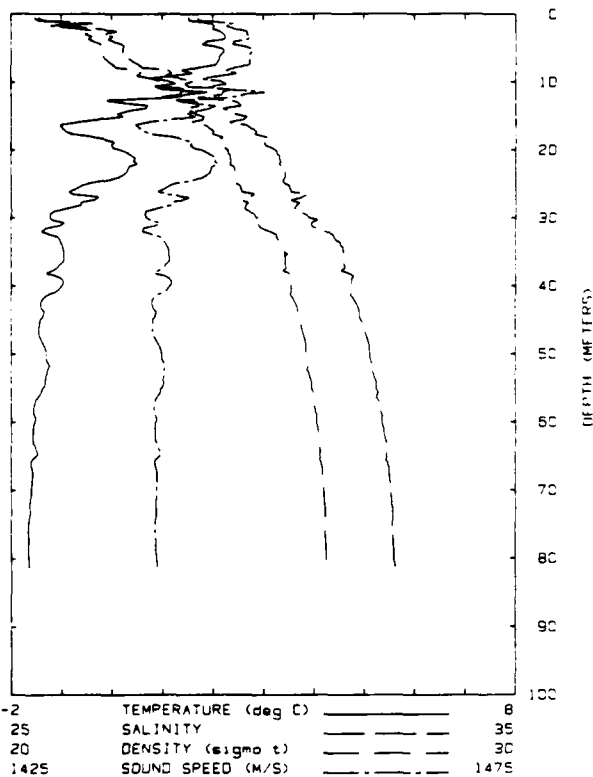
149



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.7	4.7	0.76	22.785	26.157	20.989	1440.9
10.0	10.0	-0.25	24.305	29.011	23.314	1440.1
15.9	15.9	-1.37	24.971	31.011	24.957	1437.6
22.2	22.1	-1.49	25.848	32.067	25.814	1438.5
26.4	26.2	-1.58	25.736	32.201	25.989	1438.4
28.5	28.3	-1.58	25.738	32.282	25.990	1438.5
28.5	28.3	-1.58	25.739	32.281	25.989	1438.5
27.5	27.3	-1.58	25.735	32.281	25.989	1438.4
25.6	25.5	-1.58	25.733	32.279	25.987	1436.4

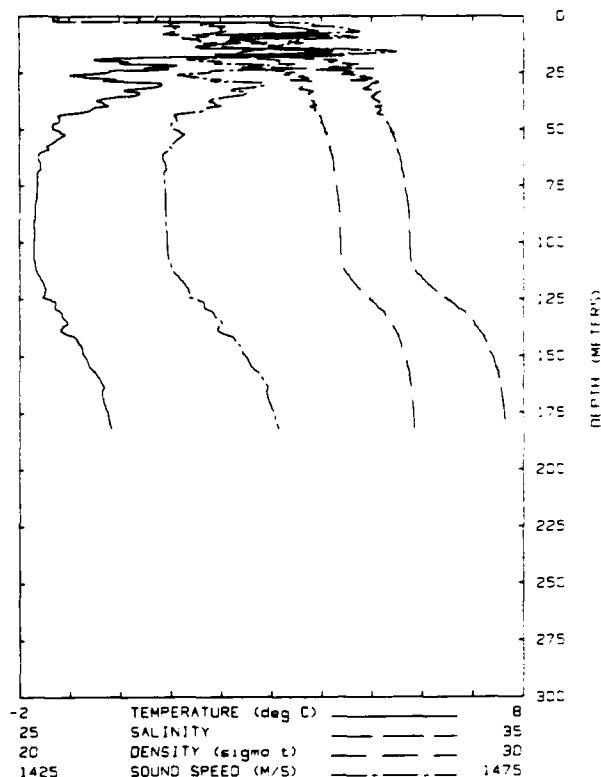
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
150	X		249	0429	Ship	72 0.0	156 45.7
151	X		249	0648	Ship	72 0.0	155 25.5

150



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.5	0.5	1.53	22.810	25.555	20.478	1443.5
6.7	6.7	2.13	24.893	27.342	21.870	1448.7
15.2	15.2	0.23	25.171	28.872	23.829	1443.3
23.8	23.7	0.23	25.780	30.431	24.438	1444.4
32.6	32.5	-1.24	25.381	31.395	25.264	1439.0
41.2	41.0	-1.13	25.700	31.736	25.537	1440.1
49.8	49.5	-1.32	25.825	32.106	25.841	1439.8
58.5	58.2	-1.56	25.804	32.330	26.028	1439.1
67.2	66.8	-1.59	25.813	32.508	26.173	1439.3
76.1	75.8	-1.68	25.810	32.574	26.228	1439.2
81.8	81.3	-1.84	25.858	32.621	26.266	1439.5
81.8	81.3	-1.84	25.959	32.822	26.267	1439.5

151



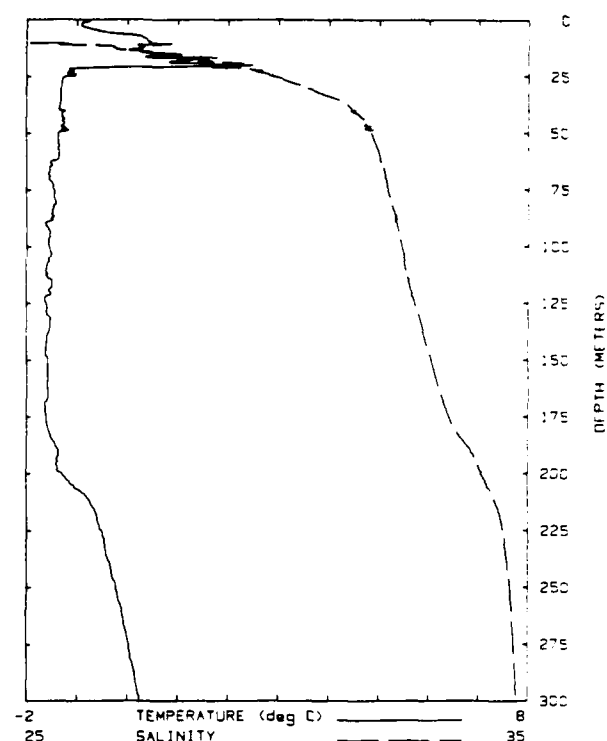
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.8	0.8	0.39	22.248	25.792	20.709	1438.6
3.8	3.6	3.01	26.397	28.627	22.834	1454.2
8.7	8.7	2.38	26.826	29.719	23.748	1452.9
14.0	13.8	1.50	26.524	30.172	24.187	1449.7
19.1	19.0	-0.35	25.842	30.864	24.810	1442.2
24.2	24.1	-0.07	26.239	31.358	25.197	1444.3
29.8	29.6	0.72	27.452	32.119	25.771	1449.0
35.0	34.8	0.34	27.107	32.086	25.748	1447.3
40.4	40.2	-0.39	26.542	32.083	25.793	1444.0
45.7	45.5	-1.20	26.060	32.301	25.896	1440.6
51.1	50.8	-1.19	26.143	32.397	26.073	1440.8
56.4	56.1	-1.35	26.071	32.469	26.136	1440.3
62.0	61.8	-1.61	25.933	32.563	26.218	1439.2
67.4	67.0	-1.57	25.892	32.599	26.246	1439.6
72.9	72.5	-1.64	25.874	32.648	26.287	1439.4
78.3	77.8	-1.85	25.880	32.675	26.309	1439.5
83.8	83.3	-1.88	26.000	32.720	26.347	1439.5
89.3	88.7	-1.89	26.008	32.740	26.363	1439.5
94.7	94.1	-1.70	26.020	32.756	26.376	1439.6
100.1	99.5	-1.70	26.020	32.762	26.381	1439.7
105.6	104.9	-1.71	26.022	32.769	26.387	1439.7
111.4	110.6	-1.68	26.092	32.826	26.433	1440.1
116.8	116.1	-1.57	26.310	33.009	26.578	1440.9
122.4	121.6	-1.49	26.585	33.292	26.806	1441.8
127.9	127.0	-1.27	27.018	33.637	27.079	1443.4
133.5	132.6	-1.14	27.330	33.918	27.302	1444.4
139.1	138.1	-1.17	27.455	34.118	27.465	1444.6
144.6	143.5	-0.83	27.885	34.282	27.585	1446.6
149.9	148.8	-0.74	28.002	34.385	27.648	1447.2
155.5	154.4	-0.82	28.185	34.443	27.707	1447.9
160.9	159.7	-0.41	28.410	34.528	27.766	1449.1
166.2	165.0	-0.34	28.495	34.562	27.780	1449.6
171.5	170.2	-0.32	28.535	34.592	27.814	1449.8
176.8	175.5	-0.24	28.628	34.818	27.829	1450.3
182.3	180.8	-0.18	28.693	34.841	27.846	1450.6
187.1	181.7	-0.17	28.704	34.840	27.845	1450.7
183.1	181.7	-0.17	28.708	34.643	27.848	1450.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
152	X		249	0904	Ship	71 59.8	154 4.6
153	X		249	1158	Ship	71 59.2	152 48.5

152



153



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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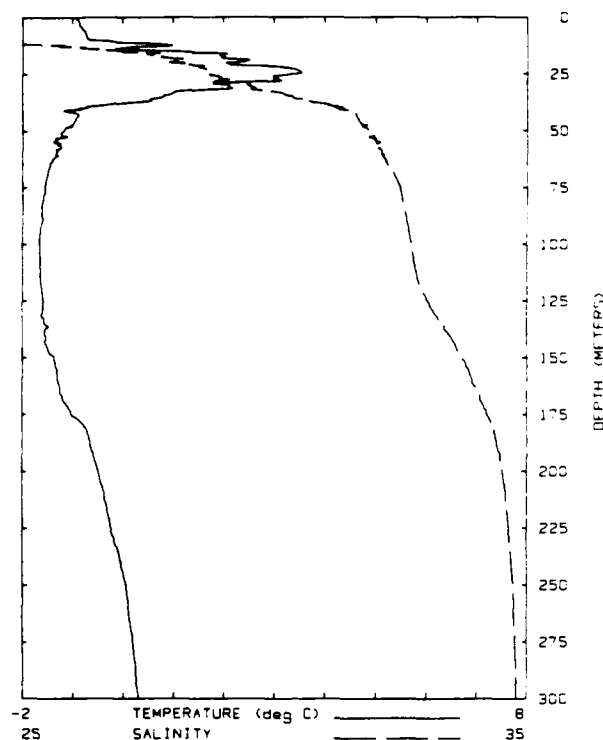
-0.1	-0.1	8.37	30.584	30.423	23.922	1470.4
5.3	5.2	8.61	31.084	30.761	24.159	1471.8
10.6	10.6	8.54	31.128	30.889	24.253	1471.8
15.8	15.8	4.93	30.003	31.081	24.605	1465.6
21.0	20.9	-0.24	25.736	30.873	24.813	1442.8
26.3	26.1	-0.99	25.577	31.435	25.290	1440.1
31.6	31.5	-1.24	25.538	31.635	25.459	1439.3
37.0	36.8	-1.10	26.010	32.128	25.853	1440.7
42.4	42.2	1.83	26.134	32.049	25.659	1453.2
47.8	47.5	1.22	27.644	32.094	25.722	1451.5
53.1	52.9	0.95	27.662	32.143	25.777	1450.4
58.4	58.0	0.31	26.841	31.740	25.487	1447.1
63.7	63.3	0.09	27.070	32.269	25.823	1446.8
69.0	68.6	0.21	27.186	32.285	25.830	1447.5
74.3	73.9	-0.25	26.878	32.362	26.012	1445.6
79.5	79.0	-0.37	26.793	32.379	26.031	1445.1
84.8	84.2	-0.73	26.532	32.404	26.065	1443.6
90.0	89.4	-0.78	26.483	32.409	26.071	1443.3
95.1	94.5	-1.15	26.411	32.697	26.315	1442.1
100.2	99.8	-1.58	26.284	32.994	26.566	1440.6
105.4	104.7	-1.81	26.342	33.096	26.650	1440.7
110.5	109.8	-1.60	26.419	33.194	26.729	1440.9
115.7	114.9	-1.58	26.515	33.295	26.810	1441.2
120.8	120.0	-1.42	26.785	33.488	26.960	1442.7
126.0	125.2	-1.10	27.290	33.823	27.224	1444.4
131.2	130.3	-0.59	28.055	34.280	27.574	1447.5
136.3	135.4	-0.23	28.573	34.583	27.786	1449.6
141.5	140.5	-0.12	28.720	34.832	27.838	1450.3
146.7	145.6	-0.01	28.854	34.882	27.871	1450.9
151.9	150.8	0.00	28.877	34.882	27.878	1451.1
157.1	155.9	0.02	28.888	34.702	27.885	1451.2
162.1	161.0	0.05	28.940	34.715	27.894	1451.5
167.3	166.0	0.08	28.981	34.732	27.906	1451.7
172.5	171.2	0.11	29.027	34.751	27.920	1452.0
177.8	176.5	0.15	29.056	34.749	27.916	1452.2
183.1	181.8	0.17	29.083	34.757	27.921	1452.4
188.5	187.1	0.20	29.128	34.774	27.934	1452.7
194.0	192.5	0.23	29.153	34.774	27.932	1452.9
199.4	197.9	0.24	29.164	34.778	27.935	1453.0
205.0	203.4	0.26	29.192	34.786	27.939	1453.2
210.5	208.9	0.27	29.206	34.780	27.942	1453.4
216.0	214.3	0.28	29.237	34.801	27.950	1453.6
221.3	218.6	0.30	29.252	34.810	27.957	1453.7
227.0	225.2	0.32	29.285	34.821	27.964	1453.9
232.8	230.9	0.32	29.286	34.821	27.964	1454.0
238.6	236.7	0.32	29.285	34.819	27.963	1454.1
244.4	242.4	0.32	29.288	34.819	27.963	1454.2
249.7	247.7	0.32	29.294	34.821	27.964	1454.3
255.4	253.3	0.32	29.296	34.820	27.964	1454.4
261.1	259.0	0.34	29.318	34.828	27.969	1454.6
266.7	264.5	0.35	29.329	34.830	27.970	1454.7
272.6	270.3	0.36	29.348	34.839	27.977	1454.8
278.5	276.2	0.37	29.358	34.835	27.973	1455.0
284.2	281.8	0.37	29.387	34.837	27.975	1455.1
289.8	287.3	0.38	29.387	34.841	27.977	1455.3
295.2	292.7	0.40	29.399	34.845	27.978	1455.4
301.0	298.4	0.40	29.402	34.846	27.980	1455.5
306.7	304.0	0.39	29.403	34.851	27.985	1455.6

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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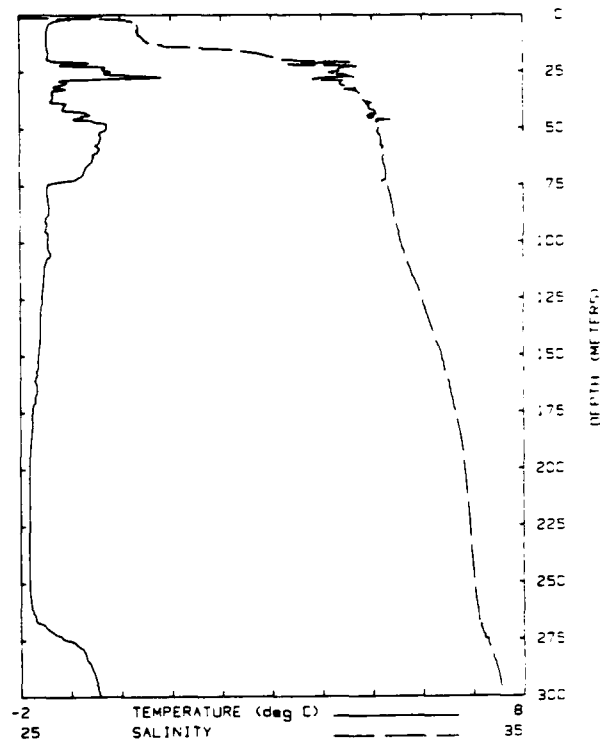
0.8	0.8	-0.81	18.253	19.058	15.304	1423.9
1.8	1.8	-0.81	17.513	20.740	16.660	1425.7
7.8	7.7	0.30	21.419	24.812	19.824	1437.0
13.1	13.1	0.29	22.987	26.812	21.530	1439.7
18.7	18.6	1.06	24.795	28.411	22.781	1445.5
24.4	24.3	-1.00	24.425	29.893	24.045	1437.9
31.1	30.9	-1.31	24.776	30.672	24.682	1437.6
37.8	37.6	-1.33	25.270	31.364	25.242	1438.6
43.5	43.3	-1.27	25.530	31.651	25.472	1439.3
50.2	49.9	-1.38	25.808	31.845	25.631	1439.3
56.9	56.6	-1.37	25.883	31.859	25.724	1439.5
63.6	63.2	-1.52	25.636	32.153	25.803	1439.0
70.0	69.6	-1.54	25.867	32.118	25.856	1439.1
75.5	75.0	-1.44	25.787	32.181	25.905	1439.7
81.2	80.7	-1.41	25.883	32.259	25.967	1440.1
86.8	86.2	-1.49	25.889	32.352	26.044	1439.9
92.4	91.8	-1.58	25.842	32.379	26.068	1439.6
98.0	97.4	-1.56	25.895	32.435	26.113	1439.9
103.5	102.9	-1.51	25.882	32.496	26.162	1440.3
109.1	108.4	-1.58	25.957	32.536	26.195	1440.1
114.7	113.9	-1.57	26.025	32.608	26.253	1440.3
120.4	119.6	-1.56	26.075	32.661	26.296	1440.6
126.0	125.2	-1.60	26.085	32.726	26.350	1440.5
131.5	130.6	-1.56	26.184	32.808	26.415	1440.9
137.0	136.1	-1.54	26.247	32.875	26.469	1441.2
142.8	141.6	-1.60	26.249	32.837	26.520	1441.1
148.1	147.0	-1.62	26.295	33.015	26.584	1441.2
153.8	152.5	-1.58	26.379	33.086	26.641	1441.6
159.4	158.2	-1.59	26.430	33.151	26.694	1441.7
165.2	164.0	-1.58	26.491	33.232	26.759	1441.9
171.1	169.8	-1.63	26.521	33.324	26.835	1441.9
176.8	175.4	-1.60	26.613	33.422	26.914	1442.3
182.4	181.0	-1.56	26.747	33.554	27.020	1442.7
188.1	186.8	-1.43	26.909	33.748	27.174	1443.7
193.7	192.2	-1.37	27.187	33.911	27.303	1444.3
199.3	197.7	-1.39	27.236	34.021	27.393	1444.5
205.0	203.4	-1.13	27.538	34.144	27.485	1445.9
210.7	209.0	-0.84	27.886	34.280	27.584	1447.6
216.8	215.1	-0.87	28.127	34.407	27.678	1448.7
223.0	221.2	-0.58	28.248	34.484	27.722	1449.3
228.9	227.1	-0.48	28.356	34.513	27.758	1449.8
234.9	233.1	-0.43	28.446	34.559	27.792	1450.2
241.0	239.1	-0.34	28.548	34.580	27.813	1450.6
246.5	244.5	-0.30	28.588	34.607	27.824	1451.1
252.1	250.0	-0.23	28.683	34.632	27.841	1451.6
257.8	255.7	-0.17	28.780	34.664	27.864	1452.0
263.3	261.1	-0.08	28.844	34.680	27.873	1452.5
268.8	266.4	-0.05	28.887	34.693	27.882	1452.7
274.0	271.7	0.01	28.933	34.708	27.891	1453.1
279.6	277.2	0.05	28.995	34.720	27.908	1453.4
285.0	282.6	0.10	29.051	34.732	27.925	1453.7
290.8	288.3	0.15	29.109	34.748	27.915	1454.1
296.7	284.1	0.20	29.189	34.762	27.923	1454.4
302.5	289.8	0.25	29.226	34.777	27.933	1454.8
308.7	286.0	0.30	29.277	34.791	27.942	1455.1
319.1	316.3	0.33	29.315	34.801	27.948	1455.4
329.9	326.9	0.38	29.360	34.814	27.957	1455.8
340.5	337.4	0.37	29.375	34.819	27.960	1456.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
154	X		249	1653	Ship	72 0.4	151 24.9
155	X		249	2341	Ship	72 0.1	150 7.3

154



155

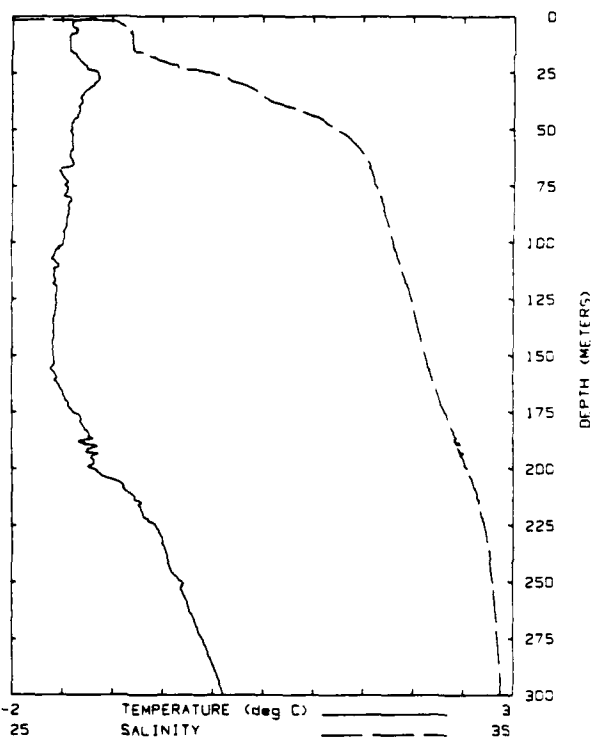


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.4	0.4	-0.80	15.896	18.408	14.778	1422.6
0.4	0.4	-0.80	15.590	18.271	14.868	1422.4
0.3	0.3	-0.80	15.551	18.220	14.827	1422.4
0.5	0.5	-0.80	15.452	18.094	14.526	1422.2
0.5	0.5	-0.88	15.451	18.091	14.523	1422.2
4.2	4.2	-0.84	18.443	21.885	17.584	1427.6
8.4	8.4	-0.70	18.700	22.110	17.765	1428.7
14.5	14.4	0.05	22.553	26.465	21.258	1438.1
19.5	19.4	2.46	25.500	28.029	22.395	1451.2
24.5	24.4	3.54	26.874	28.715	22.863	1456.9
29.4	29.3	1.80	26.087	28.337	23.481	1450.2
34.4	34.2	0.96	26.155	30.221	24.236	1447.6
39.3	39.1	-0.45	25.756	31.109	25.010	1442.4
45.2	45.0	-0.94	25.787	31.649	25.461	1440.9
50.4	50.1	-1.18	25.754	31.856	25.635	1440.2
56.3	56.0	-1.30	25.774	32.007	25.760	1439.5
62.3	61.8	-1.35	25.848	32.180	25.885	1439.9
68.4	68.0	-1.49	25.872	32.337	26.032	1439.6
74.3	73.9	-1.54	25.916	32.451	26.126	1439.6
79.6	79.1	-1.59	25.930	32.518	26.181	1439.6
85.6	85.0	-1.61	25.950	32.571	26.225	1439.6
91.6	91.0	-1.62	25.981	32.621	26.265	1439.7
97.6	97.0	-1.65	26.005	32.682	26.315	1439.8
103.6	103.0	-1.85	26.040	32.725	26.350	1439.9
109.7	109.0	-1.84	26.073	32.758	26.376	1440.1
114.0	113.2	-1.84	26.111	32.808	26.417	1440.3
119.0	118.2	-1.83	26.181	32.860	26.459	1440.5
124.2	123.3	-1.80	26.281	32.987	26.561	1440.9
129.4	128.5	-1.58	26.378	33.106	26.657	1441.2
134.5	133.6	-1.57	26.504	33.280	26.782	1441.5
139.8	138.8	-1.55	26.643	33.423	26.913	1441.9
144.8	143.8	-1.54	26.753	33.568	27.031	1442.2
149.9	148.9	-1.42	26.853	33.686	27.131	1443.1
155.0	153.9	-1.34	27.083	33.792	27.206	1443.7
160.1	159.9	-1.30	27.182	33.882	27.285	1444.1
165.1	163.8	-1.25	27.322	34.004	27.375	1444.6
170.2	169.0	-1.18	27.429	34.079	27.434	1445.0
175.4	174.1	-1.03	27.640	34.180	27.518	1446.0
180.5	179.2	-0.80	27.818	34.300	27.598	1447.3
185.6	184.2	-0.68	28.068	34.368	27.649	1448.0
190.8	189.4	-0.84	28.137	34.408	27.677	1448.4
196.1	194.6	-0.55	28.263	34.476	27.730	1448.9
201.3	199.6	-0.48	28.352	34.514	27.758	1449.4
206.8	205.0	-0.44	28.414	34.540	27.777	1449.7
211.9	210.2	-0.37	28.500	34.573	27.801	1450.2
217.2	215.5	-0.32	28.581	34.597	27.817	1450.5
222.6	221.1	-0.27	28.620	34.617	27.832	1450.9
228.1	226.3	-0.23	28.686	34.634	27.843	1451.1
233.7	231.8	-0.18	28.754	34.657	27.856	1451.6
239.4	237.5	-0.07	28.850	34.682	27.874	1452.2
245.3	243.3	-0.02	28.910	34.700	27.885	1452.5
251.3	249.2	0.05	28.991	34.725	27.902	1453.0
257.4	255.2	0.08	28.024	34.732	27.906	1453.2
263.3	261.1	0.12	28.062	34.740	27.911	1453.5
269.5	267.2	0.15	28.108	34.759	27.924	1453.7
275.6	273.3	0.19	28.152	34.785	27.928	1454.0
281.8	279.4	0.22	28.180	34.770	27.930	1454.3
287.9	285.1	0.24	28.212	34.780	27.936	1454.5
293.9	291.3	0.26	28.230	34.783	27.937	1454.7
300.1	297.5	0.30	28.277	34.787	27.947	1455.0
306.7	304.0	0.32	28.308	34.802	27.948	1455.2

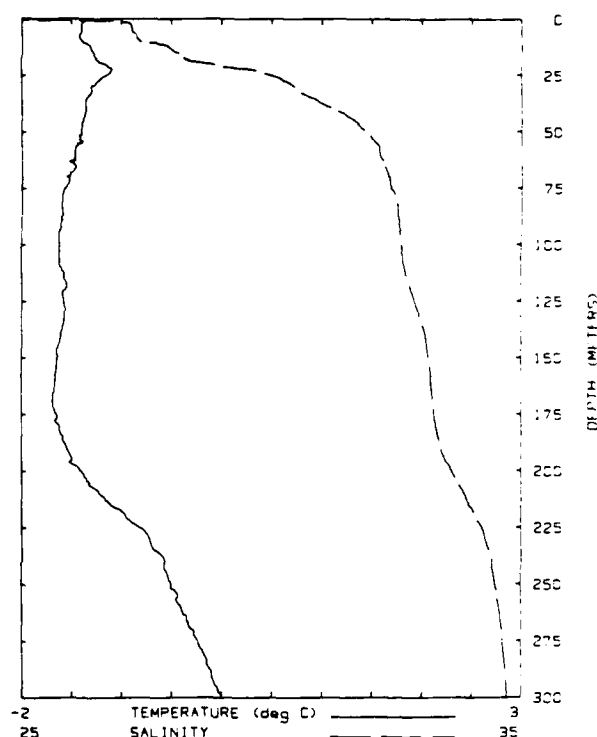
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.5	0.5	-0.33	6.309	6.766	5.385	1415.8
0.8	0.8	-0.37	18.011	21.003	16.873	1428.6
8.8	8.8	-1.44	22.217	27.359	22.005	1432.1
12.6	12.5	-1.46	22.347	27.549	22.158	1431.4
18.1	18.0	-1.43	24.082	28.878	24.041	1435.8
23.2	23.1	-0.32	26.183	31.549	25.360	1443.3
28.4	28.3	0.06	28.022	30.937	24.853	1444.4
34.4	34.2	-1.34	25.520	31.720	25.529	1438.9
40.5	40.3	-1.10	25.856	31.914	25.680	1440.5
46.3	46.0	-0.93	26.066	32.014	25.756	1441.5
51.4	51.1	-0.31	26.619	32.101	25.805	1444.6
56.7	56.3	-0.42	26.589	32.168	25.863	1444.3
61.7	61.3	-0.52	26.515	32.180	25.877	1443.8
67.0	66.6	-0.85	26.466	32.250	25.938	1443.4
72.5	72.0	-0.85	26.329	32.271	25.961	1442.6
77.7	77.2	-1.46	25.892	32.331	26.026	1439.5
83.3	82.8	-1.44	25.957	32.394	26.077	1440.2
89.4	88.9	-1.45	25.974	32.428	26.105	1440.2
95.3	94.7	-1.48	26.002	32.505	26.188	1440.3
101.4	100.7	-1.45	26.095	32.580	26.228	1440.7
106.8	106.1	-1.39	26.189	32.646	26.280	1441.1
112.0	111.2	-1.51	26.176	32.758	26.375	1440.8
118.0	118.2	-1.54	26.241	32.870	26.465	1440.9
125.3	124.4	-1.57	26.282	32.961	26.539	1441.0
131.2	130.3	-1.59	26.346	33.052	26.622	1441.1
136.8	135.8	-1.59	26.406	33.150	26.693	1441.3
143.1	142.1	-1.80	26.467	33.241	26.767	1441.5
149.3	148.3	-1.83	26.532	33.354	26.859	1441.6
155.6	154.5	-1.64	26.569	33.416	26.910	1441.7
161.4	160.3	-1.70	26.572	33.482	26.965	1441.6
167.6	166.4	-1.88	26.662	33.560	27.027	1442.0
174.2	172.8	-1.75	26.637	33.622	27.080	1441.8
180.8	179.5	-1.76	26.686	33.693	27.137	1442.0
187.5	186.1	-1.78	26.712	33.756	27.189	1442.0
193.2	191.7	-1.80	26.727	33.795	27.221	1442.1
200.0	198.4	-1.82	26.747	33.834	27.253	1442.2
206.7	205.1	-1.82	26.789	33.884	27.277	1442.3
213.8	211.1	-1.82	26.792	33.932	27.300	1442.5
221.1	218.4	-1.82	26.813	33.820	27.323	1442.6
227.3	225.5	-1.82	26.830	33.938	27.337	1442.7
235.0	233.1	-1.82	26.854	33.985	27.359	1442.8
242.6	240.7	-1.82	26.878	33.988	27.386	1443.0
249.1	247.1	-1.83	26.893	34.017	27.402	1443.2
255.2	253.1	-1.82	26.916	34.038	27.418	1443.3
261.1	258.9	-1.78	26.965	34.088	27.442	1443.8
268.8	264.8	-1.70	27.073	34.109	27.473	1444.2
272.7	270.4	-1.41	27.383	34.182	27.524	1445.7
279.7	277.3	-0.86	27.833	34.328	27.623	1448.8
286.4	284.0	-0.67	28.170	34.425	27.694	1449.8
293.3	290.7	-0.52	28.358	34.508	27.755	1451.7
299.8	297.2	-0.45	28.465	34.562	27.795	1451.2
306.4	306.7	-0.29	28.657	34.629	27.842	1451.2
319.8	317.1	-0.18	28.804	34.674	27.872	1451.0
329.8	326.9	-0.01	28.964	34.715	27.897	1451.9
339.7	336.7	0.12	29.111	34.754	27.922	1454.7
345.0	342.8	0.20	29.189	34.767	27.928	1455.2
345.7	342.8	0.20	29.188	34.766	27.927	1455.1

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
156	X		250	0731	Ship	72 0.1	148 44.6
157	X		250	1840	Ship	71 50.0	148 43.5

156



157

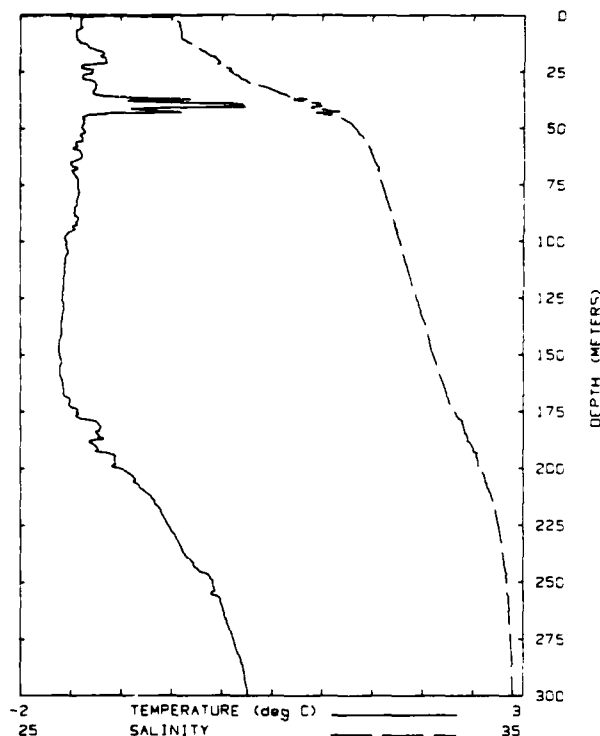


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	-1.21	19.798	23.940	19.241	1428.5
1.3	1.3	-1.22	19.832	23.723	19.087	1428.2
4.9	4.9	-1.40	22.169	27.251	21.917	1432.2
10.5	10.4	-1.43	22.262	27.401	22.038	1432.3
16.0	16.0	-1.41	22.380	27.539	22.150	1432.7
21.5	21.4	-1.28	22.851	28.196	22.880	1434.3
27.1	26.9	-1.13	23.853	29.246	23.525	1436.5
32.6	32.5	-1.74	24.203	29.829	23.988	1436.8
38.2	38.0	-1.30	24.434	30.192	24.293	1437.2
43.6	43.3	-1.34	24.839	30.917	24.780	1438.0
49.1	48.8	-1.40	25.229	31.382	25.257	1438.4
54.7	54.3	-1.40	25.505	31.750	25.555	1439.0
60.2	59.9	-1.42	25.855	31.970	25.733	1439.3
65.9	65.5	-1.39	25.789	32.123	25.857	1439.4
71.4	71.0	-1.50	25.673	32.197	25.919	1439.4
76.9	76.4	-1.45	25.707	32.286	25.992	1439.9
82.2	81.7	-1.41	25.963	32.370	26.057	1440.3
87.3	87.0	-1.44	25.992	32.438	26.111	1440.3
93.0	92.4	-1.46	26.030	32.506	26.168	1440.4
98.5	97.9	-1.48	26.068	32.577	26.226	1440.5
103.9	103.2	-1.56	26.080	32.650	26.287	1440.3
109.5	108.7	-1.56	26.117	32.734	26.356	1440.5
115.0	114.2	-1.58	26.159	32.808	26.416	1440.6
120.4	119.6	-1.55	26.250	32.900	26.490	1440.9
125.9	125.1	-1.56	26.292	32.966	26.543	1441.0
131.6	130.7	-1.57	26.338	33.031	26.596	1441.2
137.0	136.1	-1.59	26.366	33.086	26.641	1441.3
142.6	141.8	-1.58	26.413	33.146	26.690	1441.4
156.3	155.1	-1.60	26.519	33.303	26.817	1441.8
161.6	160.4	-1.56	26.611	33.382	26.881	1442.2
166.8	165.7	-1.49	26.740	33.480	26.958	1442.7
172.3	171.1	-1.43	26.848	33.558	27.018	1443.2
177.8	176.5	-1.32	27.028	33.678	27.112	1444.0
183.4	182.0	-1.28	27.132	33.788	27.185	1444.4
189.0	187.5	-1.30	27.171	33.839	27.243	1444.5
194.5	193.0	-1.18	27.401	34.012	27.379	1445.4
200.2	198.6	-1.22	27.382	34.038	27.402	1445.3
205.9	204.3	-1.01	27.680	34.176	27.506	1446.5
211.7	210.0	-0.85	27.872	34.274	27.579	1447.5
217.2	215.5	-0.73	28.008	34.316	27.608	1448.3
223.4	221.8	-0.67	28.122	34.403	27.676	1448.7
229.2	227.4	-0.54	28.278	34.455	27.713	1449.5
234.8	232.7	-0.51	28.330	34.488	27.738	1449.8
239.9	237.9	-0.48	28.408	34.533	27.772	1450.2
245.1	243.1	-0.42	28.458	34.559	27.782	1450.4
250.4	248.4	-0.34	28.551	34.584	27.808	1451.0
255.9	253.7	-0.30	28.610	34.615	27.831	1451.3
261.1	258.9	-0.25	28.688	34.628	27.840	1451.6
266.4	264.2	-0.21	28.721	34.650	27.811	1451.9
271.9	269.6	-0.15	28.785	34.671	27.869	1452.3
277.3	275.0	-0.08	28.852	34.680	27.881	1452.7
283.1	280.7	-0.05	28.903	34.702	27.889	1453.3
288.9	286.4	0.00	28.962	34.721	27.902	1453.3
294.7	292.2	0.05	29.020	34.737	27.911	1453.7
300.2	297.6	0.09	29.083	34.746	27.918	1454.0
305.8	303.2	0.14	29.113	34.758	27.924	1454.3

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.8	0.8	-1.17	19.339	23.303	18.727	1427.9
2.7	2.7	-1.40	22.122	27.195	21.871	1432.0
9.9	8.8	-1.40	22.258	27.389	22.012	1432.4
16.4	16.3	-1.27	22.958	28.189	22.673	1434.2
22.5	22.4	-1.09	24.101	29.550	23.770	1437.0
28.6	28.4	-1.25	24.574	30.345	24.416	1437.4
34.9	34.7	-1.33	24.822	30.759	24.752	1437.7
41.1	40.9	-1.36	25.186	31.291	25.183	1438.4
47.2	46.9	-1.39	25.498	31.736	25.543	1438.9
53.0	52.7	-1.41	25.666	31.887	25.747	1439.3
57.0	56.7	-1.45	25.754	32.143	25.875	1439.4
65.8	65.4	-1.45	25.842	32.262	25.970	1439.6
70.3	69.9	-1.55	25.826	32.344	26.039	1439.4
75.9	75.4	-1.57	25.860	32.413	26.096	1439.4
81.1	80.6	-1.59	25.800	32.485	26.155	1439.5
86.3	87.7	-1.60	25.929	32.529	26.190	1439.7
93.9	93.3	-1.62	25.944	32.564	26.219	1439.7
99.0	98.4	-1.62	25.967	32.596	26.245	1439.8
104.3	103.6	-1.62	25.988	32.618	26.263	1440.0
110.9	110.2	-1.60	26.038	32.663	26.299	1440.2
117.0	116.2	-1.55	26.132	32.740	26.360	1440.6
123.4	122.6	-1.59	26.170	32.828	26.433	1440.7
129.1	128.2	-1.56	26.255	32.911	26.498	1441.0
134.9	134.0	-1.58	26.316	33.007	26.577	1441.2
141.3	140.3	-1.60	26.348	33.080	26.636	1441.2
147.5	146.5	-1.64	26.357	33.124	26.673	1441.2
153.7	152.6	-1.65	26.378	33.158	26.701	1441.3
159.6	158.4	-1.65	26.387	33.190	26.727	1441.4
165.4	164.2	-1.67	26.406	33.214	26.747	1441.5
171.8	170.5	-1.68	26.412	33.236	26.765	1441.6
178.2	176.9	-1.64	26.462	33.257	26.781	1441.9
185.0	183.6	-1.60	26.540	33.318	26.830	1442.2
191.4	190.0	-1.54	26.649	33.392	26.888	1442.8
197.8	196.3	-1.51	26.775	33.533	27.001	1443.2
204.6	203.2	-1.35	27.026	33.689	27.123	1444.3
212.0	210.3	-1.21	27.274	33.868	27.262	1445.3
218.2	216.5	-1.03	27.541	34.027	27.386	1446.5
224.1	222.3	-0.80	27.740	34.148	27.478	1447.3
230.8	228.0	-0.74	27.870	34.266	27.568	1448.4
236.3	234.4	-0.68	28.085	34.349	27.633	1448.9
242.2	240.2	-0.56	28.233	34.418	27.684	1449.6
247.7	245.7	-0.53	28.298	34.460	27.716	1449.9
253.4	251.3	-0.50	28.351	34.494	27.743	1450.1
259.0	256.9	-0.44	28.428	34.533	27.772	1450.5
264.4	262.2	-0.38	28.509	34.571	27.799	1450.9
270.0	267.7	-0.33	28.579	34.599	27.819	1451.3
275.7	273.4	-0.25	28.673	34.633	27.843	1451.8
281.8	279.2	-0.18	28.748	34.649	27.853	1452.3
287.7	285.3	-0.14	28.808	34.678	27.874	1452.6
293.8	291.1	-0.09	28.861	34.691	27.882	1452.9
299.6	287.0	-0.02	28.936	34.710	27.894	1453.4
305.2	302.5	0.04	29.005	34.730	27.927	1453.8
310.6	307.8	0.09	29.061	34.743	27.915	1454.1
315.9	313.2	0.13	29.108	34.755	27.922	1454.4
322.1	319.2	0.18	29.176	34.771	27.932	1454.6
328.2	325.3	0.22	29.211	34.779	27.937	1455.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
158	X		251	0149	Ship	71 30.3	148 43.7
159		X	251	1140	Ship	71 29.6	150 2.7

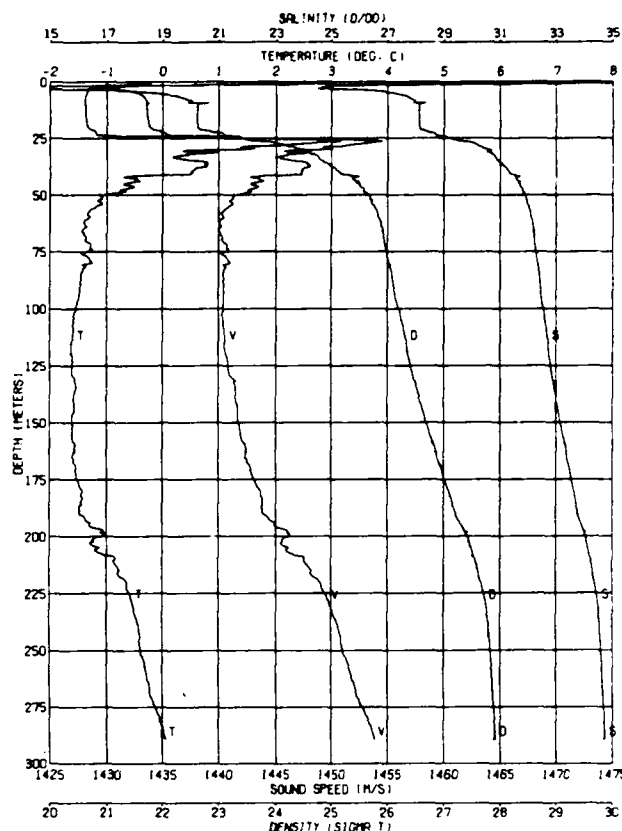
158



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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0.3	0.3	-0.15	3.156	3.214	2.512	1406.0
6.1	6.1	-1.40	22.848	28.165	22.655	1433.4
14.4	14.3	-1.32	23.135	28.479	22.909	1434.3
22.8	22.7	-1.39	23.508	28.044	23.366	1434.9
31.3	31.2	-1.24	24.124	29.718	23.908	1436.7
39.8	39.6	0.21	26.116	30.902	24.818	1445.2
48.1	47.8	-1.37	25.396	31.571	25.409	1438.8
56.7	56.4	-1.45	25.571	31.888	25.668	1439.0
65.3	64.9	-1.47	25.668	32.044	25.794	1439.3
74.0	73.5	-1.43	25.808	32.182	25.905	1439.8
82.6	82.1	-1.44	25.887	32.300	26.001	1440.0
91.3	90.8	-1.43	25.890	32.421	26.099	1440.4
100.1	99.5	-1.56	25.886	32.551	26.207	1440.1
108.9	108.1	-1.55	26.070	32.658	26.293	1440.4
117.6	116.6	-1.57	26.137	32.766	26.382	1440.6
126.4	125.5	-1.58	26.229	32.896	26.487	1440.9
135.2	134.3	-1.59	26.313	33.014	26.583	1441.1
144.1	143.1	-1.60	26.392	33.133	26.680	1441.4
153.0	151.8	-1.59	26.494	33.258	26.781	1441.7
161.8	160.7	-1.59	26.588	33.381	26.880	1442.0
170.8	169.5	-1.51	26.765	33.529	26.988	1442.8
179.8	178.4	-1.38	27.045	33.765	27.186	1443.8
188.5	187.0	-1.17	27.355	33.943	27.323	1445.2
197.5	196.0	-1.06	27.561	34.099	27.445	1446.1
206.4	204.8	-0.85	27.850	34.250	27.560	1447.4
215.5	213.8	-0.88	28.102	34.391	27.667	1448.5
224.9	223.1	-0.55	28.389	34.491	27.742	1449.4
234.3	232.4	-0.43	28.658	34.588	27.800	1450.3
243.4	241.4	-0.28	28.828	34.624	27.837	1451.2
252.6	250.5	-0.09	28.835	34.677	27.870	1452.3
262.2	260.0	-0.00	28.843	34.716	27.897	1452.9
271.8	269.6	0.07	29.030	34.742	27.915	1453.4
281.7	279.3	0.15	29.114	34.782	27.927	1453.9
291.5	289.0	0.23	29.202	34.783	27.939	1454.5
300.8	298.3	0.25	29.241	34.797	27.949	1454.8
310.6	307.8	0.28	29.272	34.808	27.955	1455.1
321.1	324.2	0.33	29.336	34.818	27.962	1455.6
344.4	341.3	0.38	29.371	34.828	27.968	1456.0
361.8	358.3	0.38	29.387	34.838	27.974	1456.3
379.1	375.6	0.37	29.413	34.843	27.979	1456.6
396.7	393.0	0.40	29.446	34.851	27.984	1457.0
414.8	410.8	0.41	29.489	34.858	27.990	1457.4
433.0	428.9	0.42	29.497	34.866	27.995	1457.8
450.7	446.4	0.43	29.518	34.873	28.000	1458.1
468.2	463.7	0.43	29.532	34.878	28.004	1458.4
485.2	480.5	0.44	29.547	34.882	28.007	1458.7
501.8	497.8	0.44	29.580	34.888	28.010	1459.0
520.7	515.7	0.45	29.575	34.891	28.013	1459.3
538.3	532.8	0.45	29.587	34.895	28.017	1459.6

159



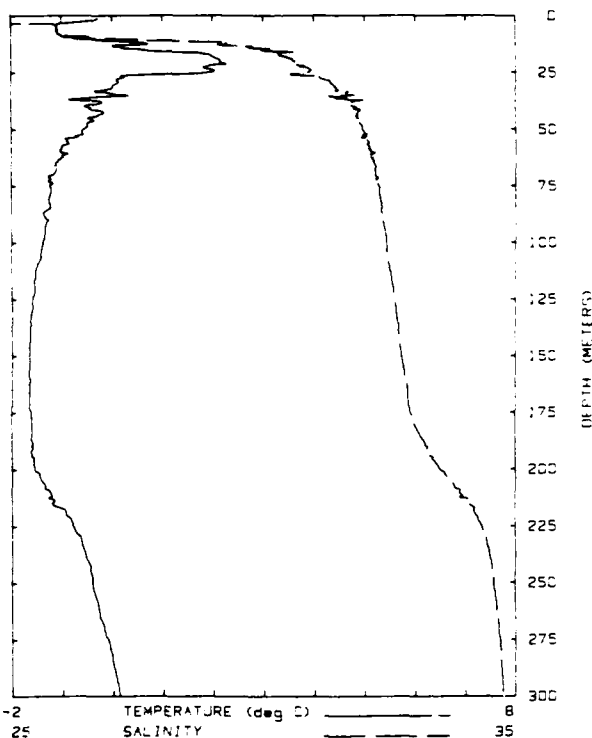
DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
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5.1	-1.35	1432.9	21.94
10.3	-1.38	1433.5	22.63
15.0	-1.37	1433.6	22.61
20.1	-1.32	1433.9	22.62
25.2	1.69	1446.6	23.77
30.2	1.01	1448.6	24.57
35.0	.61	1446.9	24.84
40.2	.51	1447.3	25.15
45.1	-.70	1442.9	25.52
50.2	-1.08	1441.4	25.68
55.1	-1.21	1440.8	25.77
60.1	-1.31	1440.4	25.84
65.1	-1.43	1440.0	25.91
70.0	-1.38	1440.3	25.95
75.1	-1.36	1440.6	26.00
80.1	-1.27	1441.0	26.03
85.3	-1.45	1440.4	26.08
90.2	-1.47	1440.4	26.10
95.1	-1.49	1440.5	26.14
100.1	-1.54	1440.4	26.21
110.1	-1.59	1440.5	26.29
120.1	-1.61	1440.7	26.36
130.0	-1.58	1441.1	26.46
140.3	-1.57	1441.5	26.57
150.1	-1.60	1441.8	26.69
160.2	-1.55	1442.4	26.83
170.4	-1.53	1442.9	26.97
180.0	-1.42	1443.7	27.08
190.0	-1.47	1443.9	27.21
200.2	-1.12	1446.1	27.42
210.1	-.87	1447.6	27.55
220.1	-.64	1449.0	27.65
230.2	-.53	1449.9	27.74
240.2	-.43	1450.6	27.79
250.1	-.40	1451.0	27.82
260.2	-.28	1451.8	27.86
270.3	-.22	1452.3	27.87
280.1	-.05	1453.3	27.90
289.5	.05	1453.9	27.92

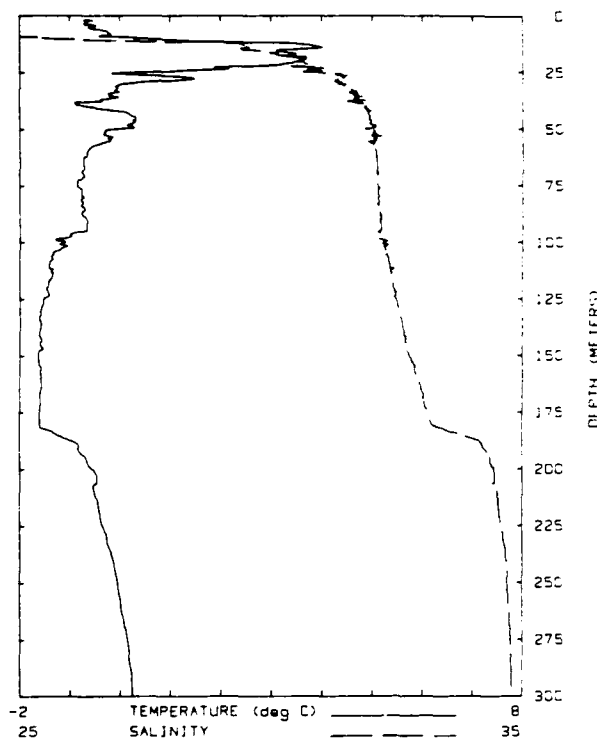
Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

160 X 251 1728 Ship 71 31.6 151 2.5
161 X 251 2036 Ship 71 31.2 151 35.3

160



161



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY
(dbar) (M) (deg C) (MS/CM)

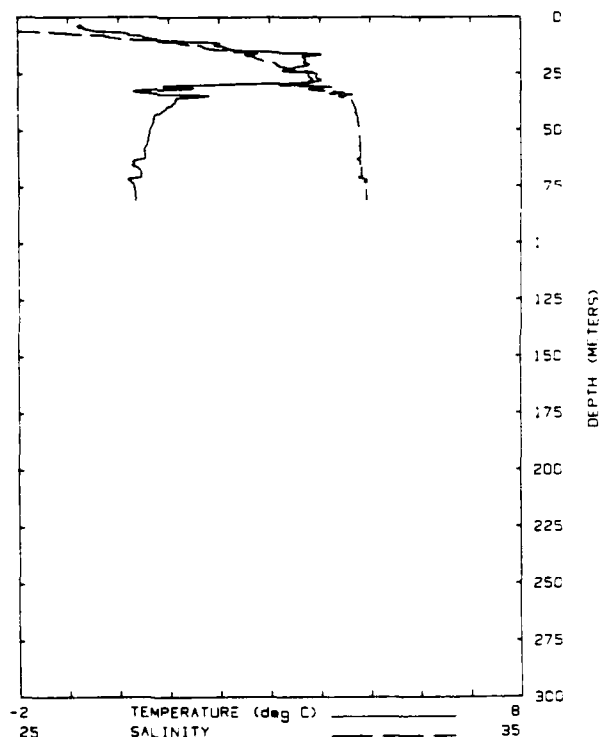
3.2	3.2	-0.74	17.355	20.418	15.402	1426.1
8.7	8.6	-0.86	21.930	26.537	21.336	1433.4
16.0	16.0	0.90	26.176	30.313	24.313	1447.2
22.3	22.2	1.03	27.372	30.812	24.651	1452.6
28.8	28.6	0.07	26.273	31.258	25.111	1444.9
35.1	34.9	0.09	26.589	31.650	25.425	1445.6
41.4	41.2	-0.46	26.261	31.782	25.553	1447.3
47.7	47.5	-0.49	26.332	31.904	25.852	1443.4
54.6	54.3	-0.94	26.075	32.031	25.770	1441.6
61.9	61.5	-0.97	26.127	32.129	25.850	1441.7
69.3	68.8	-1.12	26.076	32.225	25.932	1441.2
75.9	75.5	-1.23	26.047	32.301	25.897	1440.9
83.3	82.8	-1.24	26.074	32.339	26.027	1441.1
90.8	90.3	-1.26	26.081	32.378	26.059	1441.1
98.2	97.6	-1.35	26.057	32.430	26.104	1441.9
105.4	104.7	-1.41	26.036	32.460	26.130	1441.7
112.4	111.7	-1.51	25.994	32.509	26.172	1441.4
120.0	119.2	-1.55	26.015	32.572	26.224	1440.5
127.5	126.6	-1.59	26.010	32.608	26.254	1440.4
135.0	134.1	-1.64	26.008	32.648	26.287	1440.4
141.8	140.8	-1.63	26.044	32.685	26.320	1440.6
149.4	148.3	-1.64	26.065	32.726	26.353	1440.7
156.9	155.8	-1.66	26.091	32.776	26.392	1440.8
164.5	163.3	-1.64	26.167	32.858	26.458	1441.1
171.4	170.1	-1.65	26.189	32.889	26.467	1441.2
178.9	177.8	-1.60	26.277	32.952	26.533	1441.7
186.5	185.1	-1.60	26.380	33.108	26.660	1442.0
194.2	192.7	-1.62	26.522	33.300	26.815	1442.3
201.7	200.1	-1.55	26.729	33.503	26.978	1443.1
208.5	206.8	-1.34	27.097	33.778	27.185	1444.5
215.2	213.5	-1.14	27.453	34.033	27.395	1445.9
221.9	220.2	-0.92	27.783	34.225	27.542	1447.3
228.9	227.0	-0.74	28.031	34.359	27.644	1448.4
235.9	234.0	-0.60	28.220	34.444	27.707	1449.3
242.6	240.7	-0.48	28.388	34.506	27.751	1450.1
249.5	247.4	-0.40	28.484	34.567	27.787	1450.6
255.8	253.6	-0.37	28.538	34.584	27.817	1450.9
262.4	260.2	-0.28	28.637	34.626	27.839	1451.5
268.7	266.5	-0.22	28.711	34.653	27.857	1451.9
275.0	272.7	-0.15	28.788	34.666	27.885	1452.4
281.6	279.2	-0.04	28.818	34.713	27.887	1453.0
288.1	285.8	0.02	28.875	34.722	27.901	1453.4
294.6	292.0	0.08	28.946	34.740	27.912	1453.8
301.3	299.7	0.13	29.047	34.759	27.925	1454.2
307.5	304.8	0.18	29.172	34.776	27.936	1454.6
313.2	310.4	0.27	29.282	34.787	27.948	1455.1
321.5	328.5	0.31	29.368	34.806	27.953	1455.5
331.2	340.2	0.35	29.384	34.822	27.963	1455.9
334.8	351.8	0.38	29.385	34.830	27.969	1456.2

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY
(dbar) (M) (deg C) (MS/CM)

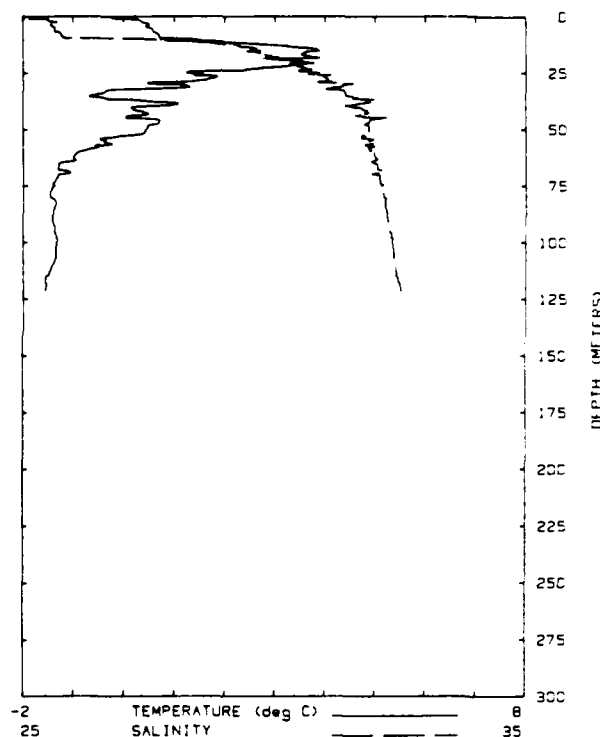
3.9	3.9	-0.71	19.177	22.867	18.230	1429.3
9.0	9.0	-0.38	19.900	23.401	18.803	1432.0
14.2	14.1	3.88	27.908	29.539	23.478	1459.6
19.3	19.2	3.70	28.574	30.574	24.324	1459.9
24.4	24.3	1.54	27.028	30.763	24.637	1450.8
29.4	29.2	0.58	26.708	31.303	25.123	1447.3
34.3	34.1	-0.07	26.378	31.538	25.342	1444.7
39.5	39.3	-0.88	25.965	31.827	25.600	1441.4
44.7	44.5	0.26	26.960	31.958	25.665	1440.9
49.7	49.4	0.26	27.062	32.079	25.762	1441.2
54.5	54.1	-0.17	26.738	32.091	25.791	1441.3
59.0	58.6	-0.59	26.389	32.062	25.783	1441.3
65.6	65.2	-0.73	26.286	32.091	25.812	1441.8
71.4	71.0	-0.69	26.328	32.104	25.821	1442.1
77.6	77.1	-0.76	26.292	32.121	25.837	1442.9
83.7	83.2	-0.73	26.300	32.097	25.818	1443.1
89.8	89.3	-0.68	26.393	32.167	25.871	1443.5
95.4	94.8	-0.66	26.431	32.194	25.892	1443.8
101.3	100.7	-1.15	26.050	32.201	25.914	1444.6
107.5	106.8	-1.36	25.890	32.336	26.028	1447.9
113.6	112.9	-1.34	26.028	32.371	26.056	1448.1
119.8	119.0	-1.43	26.004	32.429	26.106	1448.6
125.3	124.5	-1.50	25.974	32.458	26.121	1448.6
131.2	130.3	-1.59	25.960	32.537	26.196	1448.4
137.3	136.4	-1.58	26.020	32.599	26.246	1448.6
143.2	142.2	-1.58	26.084	32.685	26.316	1448.9
148.6	147.6	-1.59	26.079	32.883	26.315	1448.5
153.8	152.7	-1.63	26.133	32.789	26.409	1448.9
159.0	157.9	-1.58	26.218	32.870	26.466	1449.3
164.8	163.6	-1.58	26.222	32.883	26.557	1449.7
170.4	169.2	-1.59	26.342	33.035	26.600	1449.7
176.1	174.8	-1.60	26.392	33.113	26.663	1449.9
181.7	180.4	-1.59	26.486	33.206	26.738	1449.2
187.0	185.8	-1.18	27.289	33.879	27.271	1445.1
192.3	190.8	-0.83	27.855	34.245	27.558	1447.3
197.5	196.0	-0.66	28.086	34.382	27.843	1448.3
202.7	201.2	-0.50	28.282	34.441	27.700	1449.2
207.9	206.3	-0.46	28.292	34.402	27.666	1449.5
213.1	211.4	-0.49	28.344	34.498	27.745	1449.6
218.4	216.7	-0.42	28.426	34.529	27.787	1450.0
223.7	221.9	-0.38	28.486	34.585	27.794	1450.3
229.3	227.5	-0.30	28.588	34.601	27.820	1450.8
234.8	233.0	-0.24	28.686	34.640	27.849	1451.2
240.4	238.5	-0.18	28.783	34.667	27.866	1451.7
246.1	244.1	-0.10	28.827	34.689	27.881	1452.1
251.4	249.3	-0.05	28.887	34.700	27.887	1452.5
256.8	254.4	-0.02	28.930	34.718	27.901	1452.7
261.7	259.8	0.02	28.987	34.721	27.900	1453.0
267.0	264.7	0.08	29.032	34.749	27.919	1453.3
272.3	270.0	0.11	29.081	34.762	27.929	1453.6
277.8	275.2	0.15	29.118	34.784	27.928	1453.9
283.0	280.6	0.19	29.154	34.771	27.932	1454.1
288.6	286.2	0.21	29.188	34.784	27.941	1454.4
294.3	291.8	0.24	29.220	34.788	27.941	1454.6
300.0	297.4	0.25	29.237	34.786	27.946	1454.9

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
162	X		252	0018	Ship	71 22.2	151 32.5
163	X		252	0252	Ship	71 31.7	152 25.2

162



163

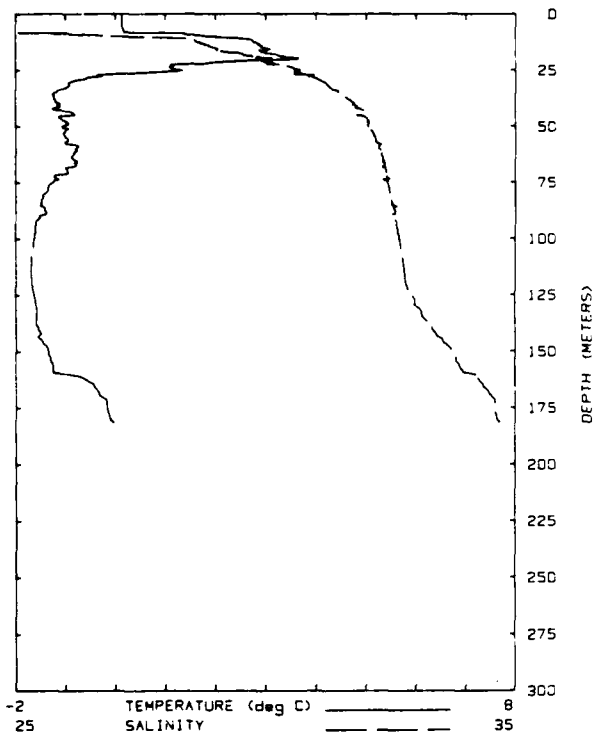


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.7	3.7	-0.74	19.230	22.432	18.347	1429.3
5.7	5.7	-0.80	20.132	23.883	19.193	1431.5
10.4	10.3	0.85	23.708	27.233	21.847	1442.8
15.2	15.2	2.47	26.861	29.431	23.513	1453.0
20.2	20.1	3.69	28.018	29.922	23.806	1458.0
25.1	25.0	3.92	28.923	30.774	24.462	1461.2
30.1	29.9	2.27	27.448	30.572	24.436	1453.9
35.2	35.0	1.82	27.870	31.529	25.231	1453.2
40.1	39.9	0.97	27.328	31.703	25.423	1449.7
45.3	45.0	0.70	27.181	31.755	25.480	1448.7
50.3	50.0	0.62	27.122	31.784	25.507	1448.4
55.5	55.2	0.58	27.087	31.786	25.519	1448.3
60.8	60.5	0.52	27.064	31.806	25.530	1448.2
66.2	65.8	0.28	26.800	31.842	25.571	1447.2
71.6	71.1	0.41	26.942	31.761	25.499	1447.8
76.8	76.3	0.32	27.000	31.926	25.636	1447.7
81.8	81.3	0.32	27.004	31.925	25.635	1447.7
81.7	81.2	0.32	27.004	31.925	25.635	1447.7

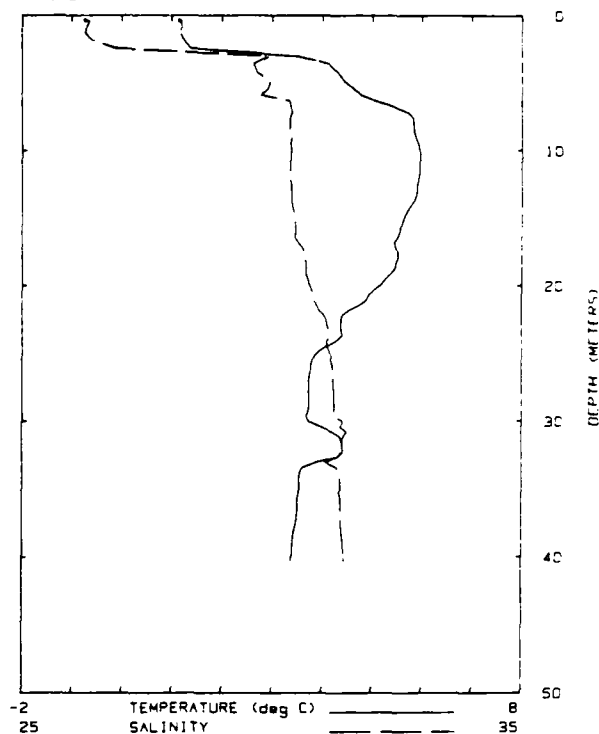
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.5	0.5	-0.17	20.432	23.936	18.232	1433.5
0.5	0.5	-0.21	20.314	23.814	18.133	1433.2
6.0	6.0	0.58	22.250	25.838	20.579	1439.4
11.0	11.0	1.58	24.751	27.894	22.341	1447.0
16.0	15.8	3.60	27.745	28.689	23.630	1458.3
21.0	20.8	3.78	28.543	30.449	24.216	1461.1
25.9	25.7	1.58	26.996	30.877	24.585	1455.9
30.8	30.7	1.24	27.253	31.339	25.115	1450.3
35.8	35.6	-0.62	26.028	31.646	25.449	1442.3
40.9	40.7	0.16	26.718	31.745	25.498	1446.1
46.0	45.8	0.87	27.288	31.956	25.643	1448.8
51.1	50.8	0.43	27.041	31.882	25.595	1447.7
56.1	55.8	-0.38	26.430	31.828	25.667	1444.2
61.4	61.0	-0.93	26.044	31.981	25.729	1441.7
66.8	66.2	-1.29	25.814	32.048	25.783	1441.1
71.7	71.3	-1.31	25.840	32.099	25.835	1441.2
76.8	76.3	-1.43	25.783	32.148	25.876	1439.8
81.7	81.2	-1.37	25.872	32.206	25.923	1441.2
86.7	86.1	-1.40	25.874	32.232	25.945	1441.2
91.6	91.1	-1.40	25.810	32.284	25.987	1441.3
96.6	96.0	-1.37	25.980	32.343	26.034	1441.6
101.5	100.8	-1.33	26.030	32.363	26.049	1441.9
106.4	105.7	-1.34	26.040	32.388	26.070	1441.0
111.4	110.6	-1.43	25.995	32.417	26.096	1441.7
116.3	115.5	-1.55	25.934	32.460	26.133	1441.3
121.2	120.3	-1.55	25.876	32.516	26.179	1441.4
122.3	121.4	-1.56	25.977	32.530	26.180	1441.4
122.3	121.4	-1.56	25.977	32.531	26.191	1441.4

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
164	X		252	0540	Ship	71 44.1	152 57.0
165	X		252	0952	Ship	71 43.7	154 17.3

164



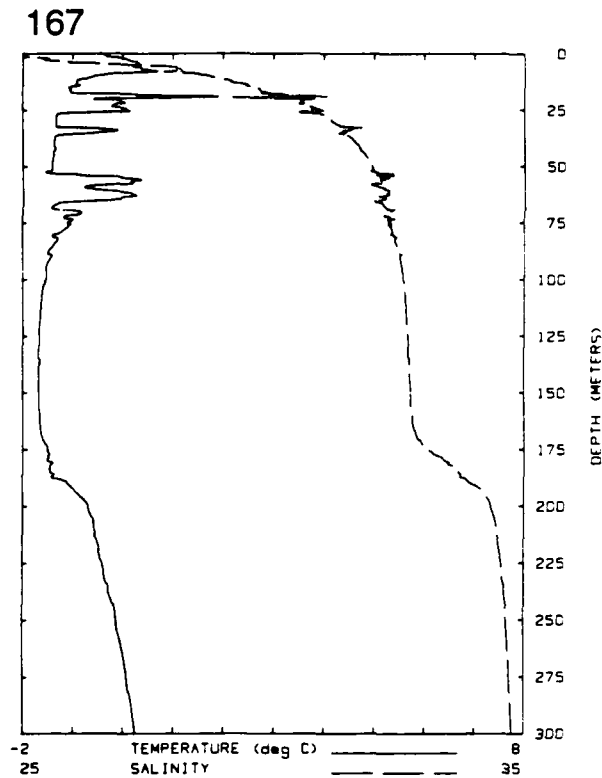
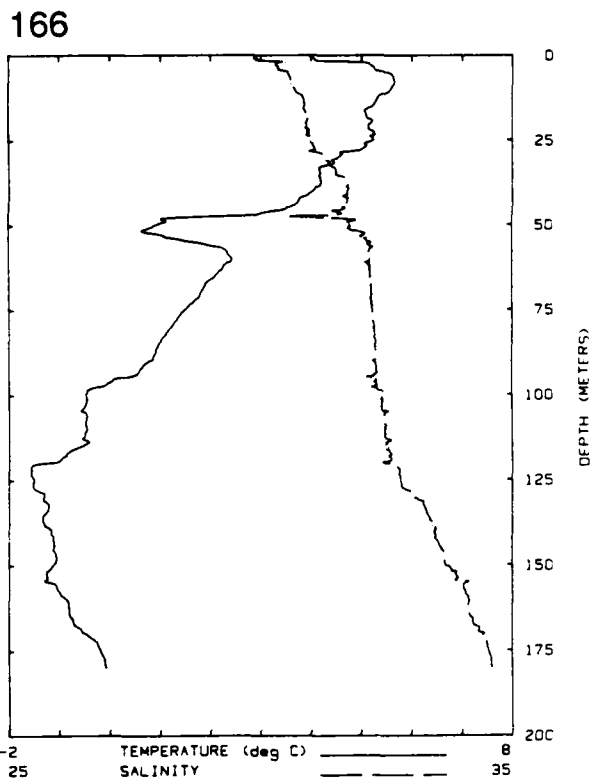
165



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	0.13	20.867	23.997	19.274	1435.0
6.1	6.1	0.15	20.687	24.008	19.283	1435.2
11.0	11.0	2.43	25.583	28.134	22.482	1451.1
16.0	15.9	3.10	26.840	29.068	23.177	1455.3
21.0	20.8	2.74	27.315	29.989	23.921	1455.0
25.9	25.8	1.11	28.578	30.817	24.546	1448.7
30.9	30.8	-0.94	25.426	31.189	25.074	1442.1
35.9	35.7	-1.26	25.425	31.499	25.349	1439.1
41.1	40.8	-1.12	25.759	31.812	25.599	1440.2
46.2	45.9	-1.13	25.886	31.984	25.738	1440.5
51.3	51.0	-0.94	26.145	32.130	25.850	1441.7
56.3	56.0	-0.94	26.194	32.199	25.906	1441.8
61.4	61.0	-0.77	26.396	32.287	25.971	1442.8
66.4	66.0	-0.74	26.464	32.341	26.014	1443.1
71.5	71.1	-0.93	26.342	32.380	26.052	1441.4
76.6	76.1	-1.32	26.091	32.457	26.125	1440.7
81.7	81.2	-1.46	26.030	32.514	26.174	1440.2
86.8	86.2	-1.42	26.102	32.566	26.216	1440.6
91.8	91.3	-1.54	26.010	32.571	26.223	1440.1
96.8	96.3	-1.59	26.022	32.645	26.284	1440.0
102.0	101.3	-1.64	26.021	32.692	26.323	1439.9
107.1	106.4	-1.87	26.025	32.730	26.355	1439.9
112.1	111.4	-1.88	26.038	32.757	26.376	1439.9
117.2	116.4	-1.69	26.056	32.784	26.399	1440.0
122.2	121.3	-1.66	26.110	32.827	26.433	1440.3
127.2	126.3	-1.61	26.282	32.979	26.555	1440.8
132.2	131.3	-1.57	26.388	33.102	26.854	1441.3
137.2	136.3	-1.59	26.460	33.216	26.747	1441.4
142.2	141.2	-1.51	26.641	33.373	26.871	1442.3
147.2	146.2	-1.45	26.839	33.579	27.037	1442.7
152.4	151.3	-1.33	27.088	33.784	27.200	1443.7
157.3	156.2	-1.24	27.240	33.889	27.282	1444.3
162.3	161.1	-0.70	27.847	34.237	27.543	1447.4
167.3	166.1	-0.40	28.322	34.403	27.685	1449.1
172.3	171.0	-0.20	28.836	34.588	27.804	1450.3
177.2	175.8	-0.18	28.883	34.600	27.812	1450.8
182.4	177.1	-0.14	28.700	34.607	27.817	1450.7
187.8	179.5	-0.11	28.740	34.625	27.830	1450.8
192.6	181.2	-0.03	28.852	34.676	27.867	1451.4
197.2	180.8	-0.03	28.851	34.678	27.869	1451.4

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.3	0.3	1.14	23.128	26.288	21.063	1442.7
5.2	5.1	5.89	30.165	30.380	23.953	1466.6
17.3	17.2	5.48	30.046	30.616	24.177	1467.3
25.3	25.2	3.85	29.216	31.185	24.795	1461.4
33.2	33.0	3.91	28.172	31.074	24.701	1461.6
40.5	40.3	3.38	28.074	31.454	25.050	1460.0
40.5	40.3	3.39	28.079	31.459	25.054	1460.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
166	X		252	1213	Ship	71 38.6	155 35.3
167	X		253	0633	Ship	72 19.4	155 6.6

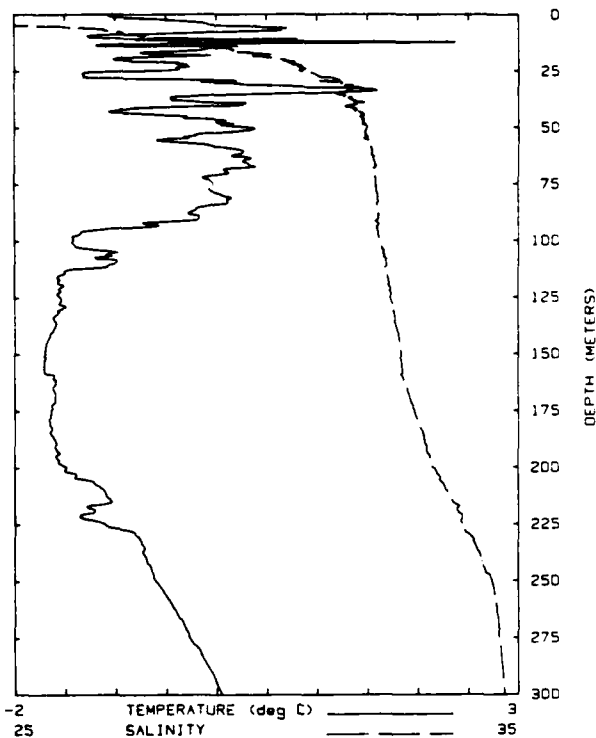


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.0	0.0	3.98	28.184	29.863	23.734	1459.9
2.4	2.4	5.13	29.466	30.295	23.963	1465.2
7.7	7.6	5.85	30.150	30.590	24.139	1467.8
12.8	12.7	5.31	30.116	30.856	24.386	1466.9
17.8	17.7	5.10	29.869	30.867	24.433	1466.1
22.8	22.7	5.27	30.133	30.816	24.438	1466.9
28.0	27.9	4.89	30.041	31.082	24.583	1466.1
33.1	32.9	4.18	29.693	31.416	24.945	1463.3
38.2	38.0	4.20	29.879	31.740	25.201	1463.8
43.2	43.0	3.75	29.592	31.718	25.226	1461.9
48.3	48.0	1.17	27.316	31.475	25.229	1450.5
53.4	53.1	1.05	27.880	32.037	25.886	1450.7
58.4	58.0	2.34	28.816	32.162	25.899	1456.7
63.6	63.2	2.24	28.740	32.168	25.712	1456.4
68.8	68.3	1.88	28.475	32.208	25.770	1454.9
73.9	73.5	1.60	28.262	32.224	25.802	1453.8
79.1	78.6	1.30	28.044	32.256	25.847	1452.5
84.3	83.8	1.02	27.848	32.288	25.889	1451.4
89.4	88.9	0.87	27.744	32.309	25.915	1450.9
94.6	94.0	0.54	27.438	32.259	25.892	1449.4
99.8	99.2	-0.43	26.771	32.401	26.052	1445.2
105.0	104.3	-0.54	26.899	32.418	26.069	1444.8
110.3	109.6	-0.45	26.816	32.477	26.113	1445.4
115.6	114.8	-0.50	26.783	32.485	26.121	1445.2
121.8	121.0	-1.55	26.118	32.717	26.341	1440.7
127.8	127.1	-1.51	26.225	32.812	26.417	1441.1
134.2	133.3	-1.22	26.808	33.285	26.782	1443.2
140.1	138.2	-1.20	26.854	33.462	26.835	1443.7
145.9	144.9	-1.11	27.131	33.598	27.043	1444.4
152.1	151.0	-1.18	27.220	33.791	27.200	1444.4
158.3	157.1	-1.04	27.529	34.054	27.409	1445.5
164.5	163.3	-0.80	27.792	34.133	27.463	1446.8
170.4	169.1	-0.54	28.151	34.330	27.612	1448.4
175.7	174.4	-0.20	28.584	34.527	27.755	1450.3
180.0	178.8	-0.09	28.732	34.588	27.797	1451.0
181.1	179.8	-0.07	28.760	34.598	27.806	1451.1
181.1	179.8	-0.07	28.759	34.598	27.806	1451.1

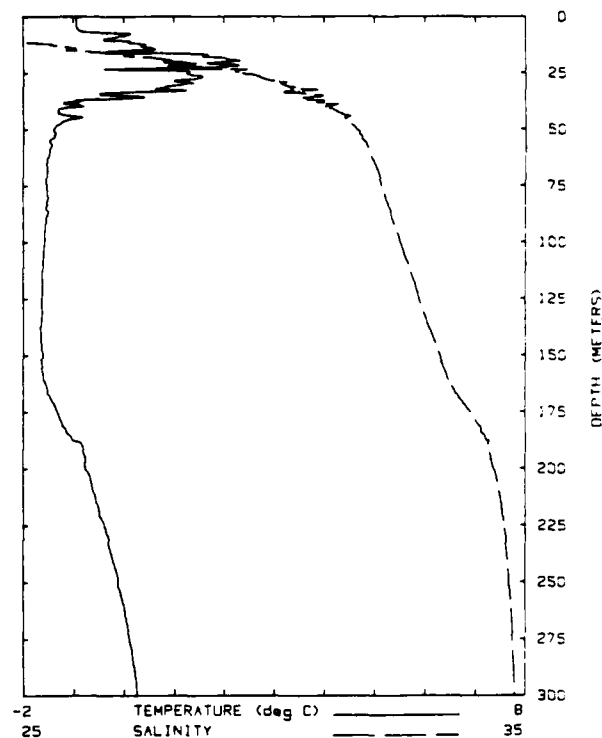
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.6	0.6	-0.38	20.767	24.537	19.717	1432.3
2.7	2.7	0.08	21.787	25.429	20.425	1435.8
7.7	7.7	0.58	24.251	28.165	22.605	1442.8
13.1	13.0	-0.93	23.834	29.175	23.464	1437.1
18.1	18.0	0.03	25.433	30.211	24.270	1442.1
23.0	22.9	-0.18	25.593	30.607	24.596	1442.8
28.0	27.8	-1.33	25.024	31.033	24.973	1438.0
33.7	33.5	-0.36	26.180	31.581	25.388	1443.4
39.3	39.0	-1.37	25.418	31.807	25.439	1438.7
45.2	44.9	-1.37	25.574	31.824	25.614	1439.1
51.0	50.7	-1.41	25.654	31.969	25.732	1439.2
56.2	55.9	0.33	27.218	32.214	25.867	1447.7
61.4	61.0	-0.18	26.808	32.336	25.989	1445.7
66.5	66.1	-1.20	25.839	32.117	25.847	1440.7
72.4	72.0	-1.08	26.083	32.186	25.899	1441.4
78.4	77.9	-1.14	26.158	32.352	26.035	1441.4
84.0	83.4	-1.32	26.073	32.428	26.102	1441.8
89.4	88.9	-1.49	26.027	32.537	26.194	1440.2
95.4	94.8	-1.53	26.013	32.580	26.214	1440.2
101.4	100.7	-1.55	26.020	32.590	26.239	1440.2
107.4	106.7	-1.61	25.994	32.620	26.264	1440.0
113.0	112.3	-1.82	26.000	32.644	26.284	1440.1
118.7	117.8	-1.65	25.990	32.651	26.290	1440.1
124.7	123.9	-1.87	25.992	32.672	26.308	1440.1
130.8	129.9	-1.87	26.013	32.692	26.324	1440.2
136.8	135.9	-1.84	26.044	32.705	26.333	1440.5
142.4	141.4	-1.88	26.030	32.719	26.346	1440.5
148.0	146.9	-1.68	26.044	32.734	26.358	1440.5
154.2	153.1	-1.67	26.054	32.741	26.363	1440.6
160.4	159.2	-1.65	26.095	32.771	26.387	1441.9
166.5	165.3	-1.64	26.128	32.794	26.406	1441.1
172.2	171.0	-1.59	26.267	32.834	26.518	1441.6
178.1	176.8	-1.46	26.557	33.187	26.720	1442.6
184.3	182.9	-1.46	26.884	33.601	27.055	1443.3
190.5	188.0	-1.14	27.354	33.811	27.296	1445.3
196.8	195.3	-0.86	27.841	34.250	27.560	1447.2
202.4	200.9	-0.88	28.067	34.353	27.836	1448.3
208.1	206.5	-0.58	28.208	34.423	27.889	1448.9
213.5	211.8	-0.55	28.259	34.458	27.715	1449.2
218.0	217.2	-0.47	28.366	34.503	27.748	1449.7
224.4	222.8	-0.45	28.411	34.536	27.774	1450.0
229.8	228.0	-0.37	28.498	34.585	27.784	1450.4
235.3	233.4	-0.34	28.548	34.588	27.809	1450.7
240.7	238.8	-0.27	28.627	34.611	27.826	1451.2
246.1	244.1	-0.15	28.753	34.641	27.845	1451.8
251.8	249.7	-0.12	28.787	34.652	27.852	1452.1
257.5	255.3	-0.08	28.834	34.666	27.881	1452.4
263.1	260.8	-0.01	28.808	34.680	27.889	1452.8
268.9	266.6	0.03	28.957	34.684	27.878	1453.1
274.9	272.5	0.08	29.010	34.708	27.887	1453.4
280.8	278.4	0.10	29.040	34.714	27.891	1453.7
286.9	284.4	0.18	29.108	34.734	27.903	1454.1
292.9	289.4	0.20	29.148	34.742	27.908	1454.3
299.0	298.4	0.23	29.181	34.755	27.916	1454.6
305.7	303.1	0.27	29.233	34.786	27.923	1454.9

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
168	X		253	1122	Ship	72 39.8	154 58.0
169	X		253	1648	Ship	72 59.9	155 1.4

168



169

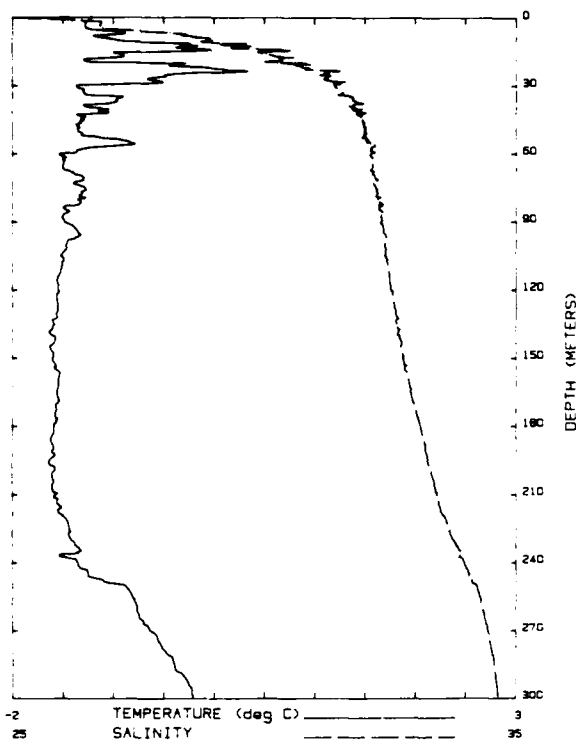


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.3	0.3	-1.06	17.856	21.419	17.207	1425.8
6.3	6.3	0.71	23.031	26.510	21.273	1441.1
11.5	11.5	0.07	23.288	27.403	22.011	1439.5
16.6	16.5	-0.41	24.441	29.334	23.579	1439.9
22.1	22.0	-0.34	25.453	30.601	24.597	1441.0
27.5	27.3	-1.31	25.025	31.020	24.962	1438.0
32.7	32.6	-1.26	27.615	31.774	25.463	1451.0
37.6	37.4	-0.43	26.186	31.652	25.447	1443.2
42.8	42.5	-0.98	25.876	31.813	25.595	1441.9
48.1	47.9	0.01	26.781	31.980	25.693	1445.8
53.1	52.8	-0.15	26.646	31.964	25.687	1445.2
58.1	57.8	-0.07	26.777	32.049	25.752	1445.7
63.1	62.7	0.19	27.059	32.148	25.821	1447.1
68.0	67.6	0.31	27.150	32.130	25.801	1447.8
73.0	72.5	-0.10	26.858	32.178	25.857	1446.0
77.9	77.5	-0.06	26.897	32.187	25.864	1446.3
83.0	82.4	0.12	27.063	32.215	25.878	1447.2
88.0	87.4	-0.26	26.754	32.206	25.888	1445.5
93.2	92.6	-0.84	26.480	32.241	25.930	1443.9
98.4	98.0	-1.42	25.866	32.243	25.955	1440.3
105.8	105.1	-0.87	26.271	32.304	25.991	1442.6
112.1	111.4	-1.07	26.257	32.388	26.062	1442.4
118.4	117.6	-1.56	25.903	32.436	26.114	1440.2
124.7	123.9	-1.57	25.930	32.475	26.146	1440.3
131.2	130.3	-1.55	25.992	32.533	26.192	1440.6
137.6	136.7	-1.58	25.985	32.559	26.214	1440.6
144.1	143.1	-1.66	25.981	32.636	26.278	1440.4
150.4	149.3	-1.70	25.878	32.668	26.305	1440.4
156.8	155.8	-1.70	25.998	32.695	26.327	1440.5
163.5	162.3	-1.59	26.124	32.744	26.364	1441.2
170.2	168.9	-1.80	26.188	32.850	26.450	1441.4
177.1	175.7	-1.84	26.237	32.946	26.529	1441.4
183.8	182.4	-1.63	26.327	33.053	26.615	1441.7
190.8	189.4	-1.58	26.435	33.148	26.689	1442.2
197.7	196.2	-1.57	26.529	33.252	26.775	1442.5
204.6	203.1	-1.39	26.794	33.408	26.897	1443.7
211.6	210.0	-1.11	27.145	33.577	27.025	1445.4
218.1	217.4	-1.28	27.175	33.809	27.218	1445.0
226.7	224.9	-1.10	27.388	33.892	27.280	1446.1
233.5	231.7	-0.75	27.841	34.108	27.441	1449.1
240.5	238.5	-0.71	27.893	34.246	27.551	1448.6
247.2	245.2	-0.84	28.120	34.348	27.631	1449.2
253.8	251.8	-0.58	28.298	34.498	27.748	1449.9
260.8	258.8	-0.46	28.421	34.552	27.787	1450.5
268.0	265.7	-0.37	28.541	34.597	27.820	1451.1
275.4	273.0	-0.27	28.651	34.623	27.836	1451.7
281.4	279.0	-0.18	28.757	34.658	27.880	1452.3
287.2	284.8	-0.11	28.858	34.675	27.870	1452.7
292.4	288.8	-0.04	28.908	34.684	27.882	1453.1
297.2	293.6	0.00	28.955	34.708	27.891	1453.4
301.5	300.8	0.05	29.007	34.724	27.901	1453.7
308.5	308.8	0.13	29.096	34.747	27.916	1454.3

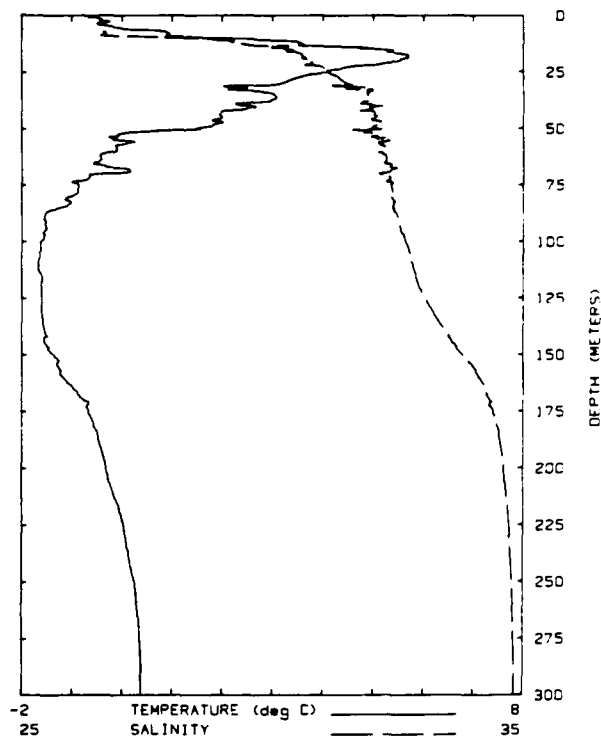
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.4	0.4	-0.87	16.844	19.850	15.943	1424.7
3.1	3.0	-0.95	18.208	21.660	17.402	1426.6
8.2	8.2	-0.10	20.293	23.700	19.040	1433.7
14.4	14.3	0.56	22.570	26.049	20.909	1440.0
19.6	19.5	2.24	25.237	27.901	22.308	1450.1
24.8	24.7	1.32	25.833	29.225	23.419	1447.8
30.3	30.1	1.20	26.310	30.187	24.186	1448.6
35.6	35.4	0.23	26.174	30.867	24.669	1445.3
41.0	41.6	-1.30	25.179	31.208	25.115	1438.6
46.2	47.9	-1.30	25.438	31.552	25.392	1439.2
51.4	54.5	-1.44	25.476	31.757	25.562	1438.8
56.8	61.0	-1.48	25.575	31.923	25.697	1439.0
62.7	67.3	-1.52	25.628	32.037	25.790	1439.1
68.2	73.7	-1.54	25.684	32.133	25.868	1439.2
74.2	79.9	-1.50	25.777	32.215	25.934	1439.6
80.6	86.1	-1.51	25.858	32.332	26.029	1439.8
87.6	93.0	-1.56	25.875	32.410	26.093	1439.8
94.5	99.8	-1.58	25.935	32.504	26.170	1439.9
101.1	106.4	-1.60	25.989	32.604	26.251	1440.0
107.6	112.9	-1.62	26.061	32.713	26.339	1440.2
114.6	118.8	-1.61	26.139	32.811	26.419	1440.5
121.2	126.3	-1.63	26.196	32.901	26.492	1440.7
127.7	132.7	-1.63	26.273	33.009	26.580	1440.9
134.1	139.1	-1.66	26.328	33.112	26.664	1441.0
140.6	145.5	-1.64	26.427	33.221	26.752	1441.4
146.6	152.1	-1.63	26.502	33.319	26.831	1441.6
152.8	158.8	-1.60	26.621	33.436	26.925	1442.0
158.3	165.1	-1.51	26.792	33.576	27.036	1442.7
163.0	171.7	-1.38	27.065	33.801	27.215	1443.8
167.8	178.2	-1.27	27.308	33.898	27.369	1444.7
172.4	185.0	-1.09	27.579	34.167	27.501	1445.8
177.5	191.0	-0.81	27.889	34.267	27.572	1447.4
182.8	197.3	-0.77	27.978	34.334	27.625	1447.8
188.0	203.6	-0.67	28.136	34.429	27.697	1448.5
193.4	210.2	-0.81	28.234	34.473	27.731	1448.9
198.4	216.8	-0.51	28.351	34.532	27.774	1449.6
203.0	222.2	-0.44	28.437	34.588	27.800	1450.0
207.5	227.7	-0.38	28.528	34.594	27.817	1450.5
212.0	232.8	-0.31	28.588	34.607	27.825	1450.9
216.0	238.0	-0.24	28.665	34.633	27.843	1451.3
220.5	243.5	-0.18	28.744	34.680	27.861	1451.7
224.8	248.8	-0.12	28.804	34.688	27.866	1452.1
229.0	254.6	-0.07	28.868	34.695	27.864	1452.5
233.2	260.0	-0.01	28.934	34.714	27.898	1452.8
237.0	265.8	0.04	28.992	34.731	27.907	1453.2
241.0	271.0	0.08	29.032	34.737	27.910	1453.4
245.0	276.7	0.13	29.087	34.751	27.919	1453.8
249.0	282.5	0.17	29.137	34.762	27.925	1454.1
253.0	288.2	0.21	29.183	34.774	27.933	1454.4

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
170	X		253	2331	Ship	72 33.8	154 10.6
171	X		255	0233	Ship	72 11.6	154 43.0

170



171

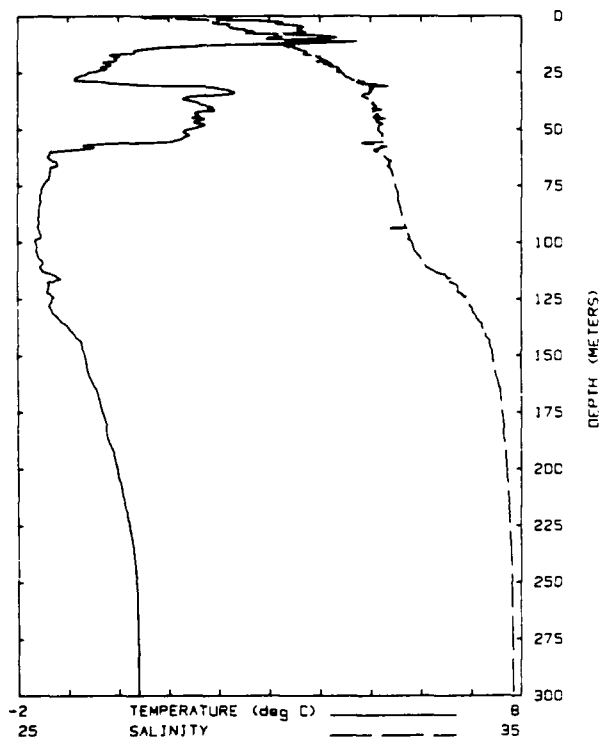


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
5.5	5.5	-0.89				
10.7	10.6	-1.14				
16.0	15.9	-1.19				
21.2	21.1	-1.11				
26.3	26.2	-1.18				
31.5	31.4	-1.19				
36.8	36.6	-1.42				
42.4	42.2	-1.38				
49.0	48.8	-1.34				
55.8	55.3	-1.40				
62.2	61.9	-1.37				
68.8	68.3	-1.37				
75.5	75.0	-1.32				
82.1	81.6	-1.31				
88.9	88.3	-1.41				
95.1	94.5	-1.46				
101.5	100.8	-1.58				
107.8	107.2	-1.48				
114.2	113.4	-1.48				
120.5	119.7	-1.54				
126.8	126.0	-1.57				
133.3	132.3	-1.59				
139.7	138.8	-1.49				
146.2	145.2	-1.49				
152.5	151.4	-1.51				
159.0	157.9	-1.52				
165.5	164.3	-1.53				
172.2	170.9	-1.56				
178.8	177.3	-1.59				
184.9	183.5	-1.59				
191.3	189.9	-1.82				
197.9	186.4	-1.82				
204.6	203.1	-1.59				
210.8	209.1	-1.81	28.582	33.368	26.870	1442.7
217.3	215.6	-1.56	28.689	33.487	26.949	1443.2
223.8	222.0	-1.49	28.815	33.549	27.013	1443.7
230.2	228.4	-1.45	28.925	33.643	27.088	1444.2
236.8	235.0	-1.38	27.088	33.785	27.202	1444.6
242.8	240.7	-1.55	27.023	33.888	27.290	1444.2
249.8	247.8	-1.33	27.313	34.035	27.402	1445.6
256.7	254.8	-0.91	27.812	34.227	27.544	1447.9
263.4	261.2	-0.79	27.865	34.305	27.603	1448.7
270.3	269.1	-0.74	28.074	34.380	27.669	1449.1
277.1	274.8	-0.64	28.210	34.449	27.712	1449.8
282.8	281.3	-0.53	28.344	34.505	27.753	1450.5
290.0	287.5	-0.42	28.489	34.566	27.787	1451.2
296.7	293.2	-0.35	28.572	34.602	27.823	1451.6
301.7	299.0	-0.25	28.687	34.623	27.842	1452.1
309.8	307.1	-0.18	28.780	34.663	27.865	1452.7

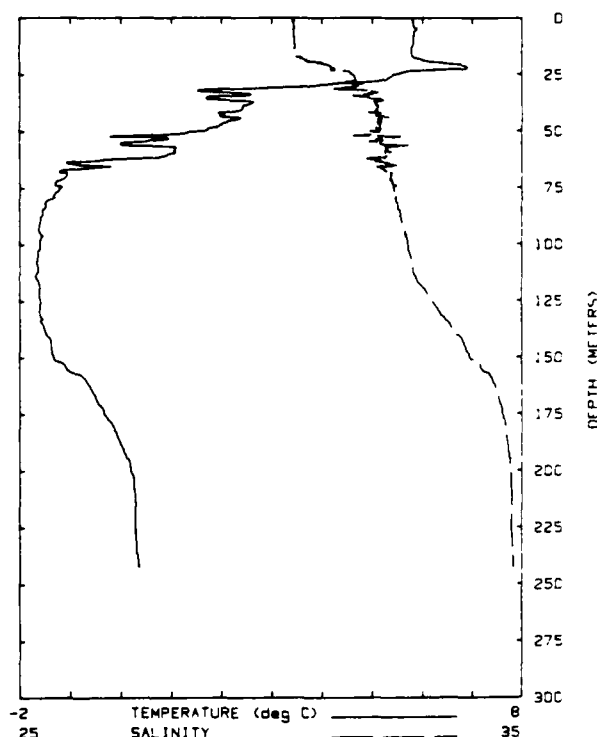
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.8	1.8	-0.40	20.508	24.213	19.456	1432.8
7.1	7.1	0.76	23.189	26.675	21.404	1441.6
12.0	12.0	3.51	27.247	29.182	23.235	1457.2
17.0	16.9	5.48	28.881	30.551	24.127	1467.2
21.8	21.8	5.13	29.824	30.803	24.364	1466.2
26.8	26.6	3.88	29.143	31.357	24.867	1467.8
31.7	31.5	2.03	28.087	31.598	25.272	1454.2
36.5	36.3	3.08	29.188	31.891	25.424	1452.2
41.5	41.2	2.50	28.788	31.882	25.543	1455.9
46.5	46.2	1.88	28.279	31.881	25.597	1454.2
51.5	51.2	0.73	27.274	31.867	25.568	1449.1
56.6	56.3	0.20	27.032	32.089	25.781	1447.0
61.6	61.3	-0.34	26.858	32.175	25.866	1444.7
66.8	66.4	-0.42	26.739	32.369	26.025	1444.7
72.0	71.6	-0.64	26.520	32.304	25.981	1443.6
78.2	77.7	-0.88	26.387	32.384	26.061	1442.7
84.2	83.7	-1.05	26.278	32.409	26.079	1442.1
89.7	89.1	-1.54	25.950	32.492	26.159	1439.9
96.0	95.3	-1.53	26.004	32.553	26.208	1440.1
102.1	101.4	-1.83	26.015	32.676	26.310	1439.9
108.3	107.6	-1.64	26.063	32.745	26.366	1441.1
114.4	113.6	-1.84	26.132	32.842	26.445	1442.3
119.8	119.0	-1.81	26.208	32.908	26.497	1443.0
126.1	125.2	-1.80	26.325	33.052	26.614	1441.0
132.1	131.2	-1.61	26.431	33.203	26.737	1441.2
138.0	137.1	-1.56	26.589	33.380	26.879	1441.8
143.6	142.6	-1.55	26.732	33.550	27.016	1442.1
148.7	147.7	-1.48	26.904	33.698	27.134	1442.8
153.8	152.7	-1.26	27.244	33.819	27.307	1444.1
159.1	158.0	-1.24	27.372	34.071	27.429	1444.6
164.4	163.2	-1.05	27.844	34.215	27.539	1445.8
170.3	169.0	-0.81	27.829	34.332	27.625	1447.1
175.3	174.0	-0.68	28.100	34.406	27.679	1447.9
180.3	179.0	-0.59	28.218	34.485	27.723	1448.5
185.2	183.8	-0.50	28.340	34.523	27.766	1449.1
190.8	189.5	-0.45	28.394	34.542	27.779	1449.4
196.8	193.3	-0.39	28.481	34.580	27.807	1449.8
199.8	198.1	-0.33	28.556	34.611	27.829	1450.2
204.3	202.7	-0.28	28.612	34.629	27.842	1450.5
208.8	207.2	-0.23	28.676	34.648	27.854	1450.8
213.8	212.2	-0.15	28.760	34.674	27.871	1451.3
218.8	217.0	-0.06	28.861	34.701	27.888	1451.9
223.8	221.8	-0.01	28.917	34.713	27.895	1452.2
228.3	226.5	0.04	28.975	34.727	27.904	1452.6
232.5	231.8	0.09	29.028	34.741	27.913	1452.9
236.3	235.4	0.13	29.074	34.753	27.921	1453.2
240.4	241.4	0.17	29.118	34.764	27.927	1453.4
244.6	246.5	0.21	29.161	34.776	27.935	1453.7
248.7	251.4	0.26	29.218	34.786	27.940	1454.0
252.5	256.4	0.29	29.245	34.792	27.944	1454.2
256.2	261.0	0.31	29.276	34.801	27.949	1454.4
260.0	265.8	0.34	29.310	34.810	27.954	1454.7
263.9	270.6	0.36	29.327	34.813	27.956	1454.8
267.7	275.3	0.38	29.338	34.817	27.959	1454.9
262.6	280.2	0.38	29.358	34.823	27.963	1455.1
267.4	285.0	0.38	29.366	34.825	27.964	1455.2
262.3	289.7	0.38	29.371	34.828	27.967	1455.3
267.1	294.5	0.39	29.378	34.832	27.970	1455.4
302.1	299.4	0.39	29.388	34.834	27.971	1455.5
307.0	304.3	0.39	29.394	34.838	27.974	1455.6

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
172	X		255	0443	Ship	72 2.6	154 53.6
173	X		255	0622	Ship	71 53.1	154 58.5

172



173



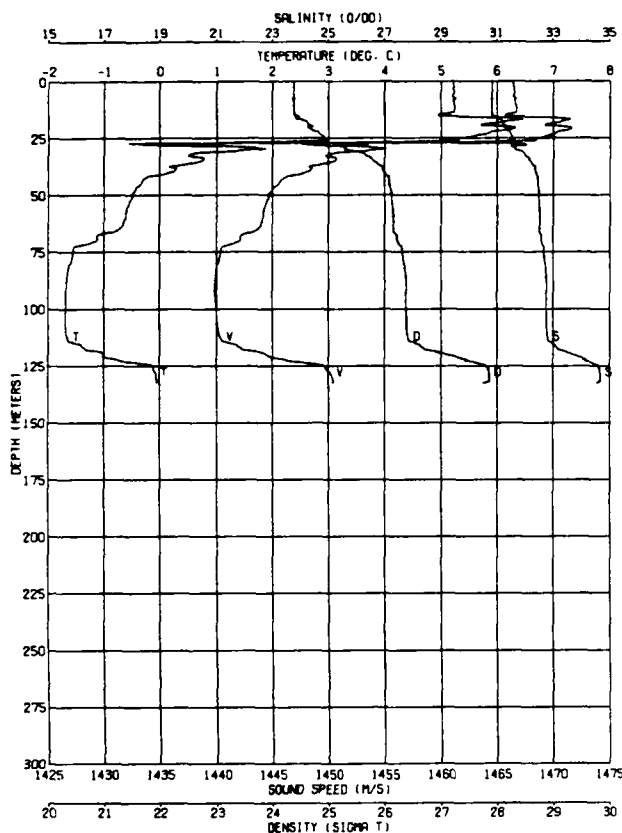
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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2.9	2.9	3.24	26.891	29.012	23.123	1455.6
8.2	8.2	3.40	26.902	30.180	24.037	1457.9
13.4	13.4	1.84	26.901	30.504	24.423	1455.8
18.7	18.6	-0.08	25.952	30.995	24.905	1443.7
23.9	23.7	-0.24	26.095	31.343	25.191	1443.5
29.1	29.0	-0.48	26.313	31.888	25.640	1443.1
34.3	34.3	2.29	26.608	31.978	25.556	1455.9
39.6	39.6	1.72	26.248	32.094	25.889	1453.6
45.1	44.8	1.51	26.048	32.057	25.874	1452.7
50.3	50.0	1.47	26.085	32.148	25.747	1452.7
55.5	55.2	1.14	27.907	32.259	25.859	1451.5
60.8	60.5	-1.37	25.894	32.246	25.955	1435.9
67.1	66.7	-1.32	26.026	32.385	26.051	1442.5
73.0	72.5	-1.40	26.031	32.456	26.126	1442.3
79.0	78.5	-1.54	25.977	32.536	26.195	1439.8
85.3	84.8	-1.57	26.000	32.595	26.243	1435.8
91.6	91.2	-1.57	26.062	32.673	26.306	1442.1
98.1	97.4	-1.53	26.163	32.766	26.380	1442.5
103.7	103.0	-1.62	26.155	32.858	26.457	1442.2
109.6	108.8	-1.50	26.399	33.057	26.816	1441.2
115.4	114.6	-1.27	26.921	33.508	26.974	1443.0
120.6	119.8	-1.39	26.993	33.737	27.163	1442.8
126.3	125.4	-1.33	27.180	33.924	27.313	1443.4
131.9	131.0	-1.31	27.285	34.047	27.412	1443.8
137.1	136.1	-1.06	27.811	34.207	27.533	1445.3
142.1	141.1	-0.87	27.824	34.276	27.582	1448.3
147.2	146.1	-0.73	26.019	34.380	27.680	1447.2
152.2	151.1	-0.66	26.127	34.437	27.704	1447.7
157.3	156.1	-0.82	26.179	34.466	27.725	1448.0
162.1	161.0	-0.55	26.288	34.522	27.767	1448.5
167.1	165.9	-0.43	26.431	34.580	27.809	1449.2
172.1	170.8	-0.37	26.495	34.594	27.818	1449.6
177.0	175.7	-0.31	26.566	34.622	27.838	1449.9
181.8	180.5	-0.25	26.647	34.649	27.855	1450.4
186.7	185.3	-0.23	26.870	34.654	27.858	1450.5
191.5	190.0	-0.15	26.759	34.883	27.878	1451.0
196.4	194.8	-0.08	26.828	34.894	27.884	1451.4
201.1	199.6	-0.03	26.867	34.713	27.897	1451.8
206.0	204.4	0.00	26.867	34.724	27.904	1452.0
210.9	209.2	0.06	26.886	34.737	27.911	1452.4
215.8	214.1	0.10	26.035	34.749	27.918	1452.6
220.6	219.0	0.17	26.108	34.766	27.929	1453.0
225.6	224.0	0.21	26.151	34.778	27.935	1453.3
230.7	228.8	0.24	26.180	34.785	27.940	1453.6
235.7	233.8	0.28	26.233	34.789	27.949	1453.8
241.1	239.1	0.30	26.259	34.804	27.952	1454.0
246.0	244.0	0.32	26.285	34.809	27.954	1454.2
250.6	248.8	0.35	26.318	34.819	27.960	1454.4
255.3	253.2	0.36	26.338	34.827	27.967	1454.6
260.3	258.1	0.37	26.347	34.828	27.968	1454.7
265.4	263.1	0.37	26.353	34.830	27.969	1454.8
270.5	268.2	0.38	26.357	34.830	27.969	1454.9
275.5	273.2	0.38	26.366	34.837	27.974	1455.0
280.6	278.2	0.38	26.375	34.837	27.974	1455.1
285.6	283.2	0.39	26.383	34.841	27.977	1455.2
290.6	288.3	0.39	26.390	34.845	27.980	1455.3
295.6	293.4	0.39	26.395	34.848	27.980	1455.4
301.0	298.4	0.39	26.400	34.847	27.982	1455.5
306.3	303.8	0.40	26.404	34.848	27.982	1455.6

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.8	1.8	5.80	30.133	30.434	23.998	1468.1
3.0	3.0	5.81	30.136	30.435	23.999	1468.2
8.4	8.4	5.81	30.143	30.437	24.000	1468.3
13.7	13.7	5.78	30.149	30.465	24.025	1468.3
19.2	19.1	6.05	30.571	30.689	24.170	1469.7
24.8	24.7	5.54	30.867	31.599	24.946	1468.9
30.9	30.7	3.37	29.250	31.886	25.235	1460.1
36.3	36.1	1.84	29.414	32.185	25.754	1454.2
41.6	41.4	2.27	28.695	32.088	25.854	1456.0
46.9	46.6	2.03	28.552	32.164	25.724	1455.2
52.5	52.2	0.19	26.666	31.834	25.408	1446.3
58.1	57.8	1.05	27.885	32.319	25.912	1451.2
63.8	63.2	-0.45	26.522	32.105	25.813	1444.1
69.3	68.9	-1.05	26.237	32.367	26.045	1441.7
75.2	74.8	-1.16	26.197	32.425	26.095	1441.4
81.2	80.7	-1.46	26.002	32.484	26.150	1441.1
87.8	87.3	-1.55	26.003	32.572	26.224	1440.0
94.4	93.8	-1.62	26.001	32.648	26.287	1439.8
101.0	100.4	-1.80	26.068	32.714	26.340	1440.1
107.5	106.8	-1.65	26.072	32.773	26.389	1440.0
113.2	112.5	-1.65	26.096	32.804	26.414	1440.2
120.1	119.3	-1.59	26.297	33.011	26.581	1440.8
126.5	125.8	-1.58	26.456	33.211	26.743	1440.3
133.1	132.2	-1.58	26.615	33.426	26.916	1440.7
139.3	138.3	-1.50	26.823	33.615	27.067	1440.4
145.0	144.0	-1.38	27.074	33.829	27.237	1440.4
151.6	150.5	-1.31	27.236	33.967	27.347	1440.0
157.5	156.4	-0.89	27.718	34.245	27.561	1446.0
163.0	161.8	-0.84	28.153	34.445	27.739	1448.0
169.5	167.2	-0.50	28.337	34.532	27.773	1448.8
173.6	172.4	-0.36	28.508	34.598	27.820	1449.6
178.8	177.5	-0.24	28.651	34.649	27.856	1450.3
184.0	182.7	-0.10	28.807	34.694	27.884	1451.1
189.1	187.7	-0.00	28.905	34.712	27.894	1451.7
194.0	192.5	0.09	29.017	34.748	27.918	1452.3
198.8	197.4	0.19	29.110	34.764	27.926	1452.8
203.7	202.1	0.24	29.174	34.781	27.937	1453.1
208.6	207.0	0.26	29.184	34.785	27.939	1453.3
213.3	211.7	0.28	29.222	34.793	27.944	1453.5
218.0	216.3	0.29	29.232	34.785	27.946	1453.6
222.9	221.1	0.29	29.234	34.798	27.948	1453.7
227.7	225.9	0.28	29.238	34.798	27.948	1453.8
232.3	230.5	0.31	29.264	34.809	27.956	1453.9
237.1	235.2	0.31	29.271	34.810	27.956	1454.0
242.1	240.2	0.34	29.308	34.820	27.963	1454.3
243.8	242.0	0.35	29.319	34.827	27.968	1454.3
242.8	240.8	0.35	29.319	34.827	27.968	1454.3

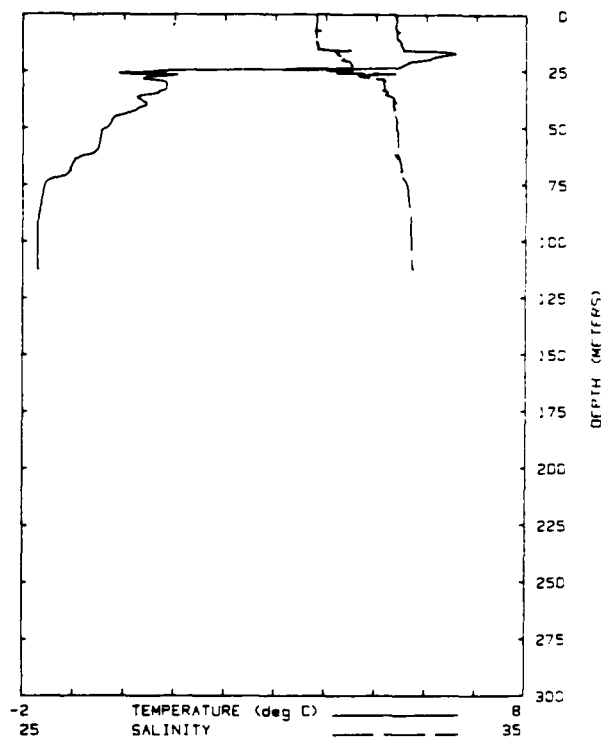
Station Number 174
 ASL Cast X
 APL Cast X
 Julian Day 255
 GMT hhmm 0829
 Platform Ship
 Latitude 71 42.0
 Longitude 155 39.7



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	5.23	1466.6	24.38	30.82
10.4	5.24	1466.7	24.39	30.82
15.0	4.95	1465.7	24.41	30.82
20.1	6.28	1471.2	24.66	31.29
25.2	5.28	1468.4	24.95	31.56
30.2	1.48	1454.0	25.32	31.65
35.0	.75	1450.7	25.82	32.20
40.3	.14	1447.9	26.02	32.40
45.1	-.34	1445.5	26.08	32.44
50.0	-.50	1444.7	26.12	32.48
55.1	-.58	1444.3	26.14	32.50
60.1	-.62	1444.1	26.14	32.50
65.1	-.73	1443.7	26.15	32.51
70.0	-1.14	1442.1	26.23	32.59
75.3	-1.56	1440.4	26.31	32.68
80.2	-1.61	1440.1	26.33	32.70
85.4	-1.67	1439.9	26.36	32.74
90.1	-1.68	1439.8	26.38	32.76
95.1	-1.69	1439.9	26.38	32.76
100.2	-1.69	1440.0	26.38	32.76
110.1	-1.69	1440.1	26.39	32.77
120.0	-1.01	1444.4	27.09	33.66
130.1	-.06	1450.4	27.88	34.68
132.4	-.06	1450.3	27.75	34.53

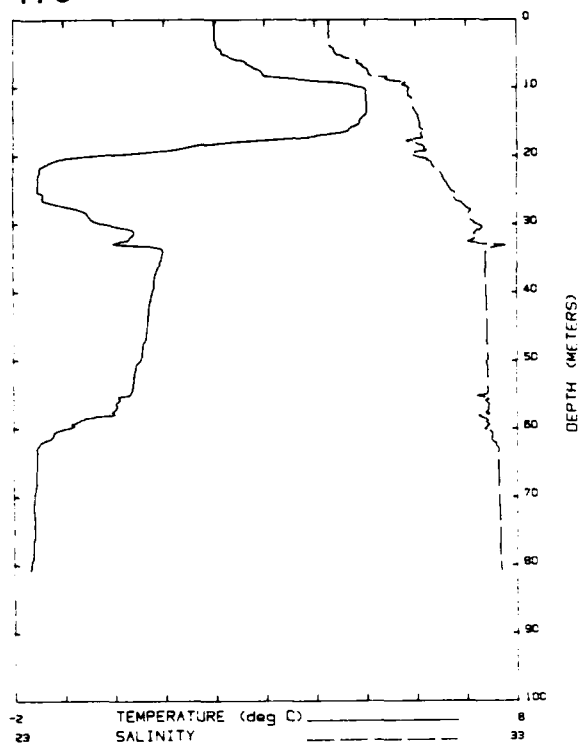
175



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.0	0.0	5.38	30.128	30.811	24.742	1466.9
0.8	0.8	5.40	30.143	30.814	24.743	1467.0
5.4	5.4	5.40	30.144	30.815	24.744	1467.0
10.6	10.6	5.42	30.173	30.824	24.748	1467.2
15.7	15.8	5.54	30.285	30.839	24.747	1467.8
20.8	20.7	5.80	30.877	31.377	24.741	1469.6
26.0	25.9	0.05	26.221	31.215	25.076	1444.7
31.1	31.0	0.83	27.585	32.147	25.787	1445.6
36.4	36.2	0.30	27.257	32.305	25.942	1447.4
41.5	41.3	0.28	27.289	32.362	25.989	1447.5
46.9	46.6	-0.34	26.810	32.412	26.052	1445.2
52.1	51.8	-0.45	26.764	32.437	26.081	1444.4
57.5	57.2	-0.49	26.733	32.438	26.083	1444.3
62.9	62.5	-0.85	26.452	32.446	26.103	1442.7
68.2	67.8	-1.06	26.341	32.515	26.165	1441.9
74.2	73.7	-1.51	26.044	32.594	26.241	1440.7
77.5	77.1	-1.58	26.020	32.643	26.282	1439.7
81.9	81.4	-1.82	26.005	32.662	26.298	1439.6
86.3	85.7	-1.67	25.981	32.690	26.322	1439.5
94.0	93.4	-1.69	25.989	32.712	26.340	1439.5
100.3	99.6	-1.70	25.994	32.721	26.348	1439.6
106.7	106.0	-1.70	25.999	32.727	26.353	1439.7
112.5	111.7	-1.70	26.006	32.734	26.358	1439.8
113.3	112.5	-1.68	26.039	32.752	26.372	1440.0

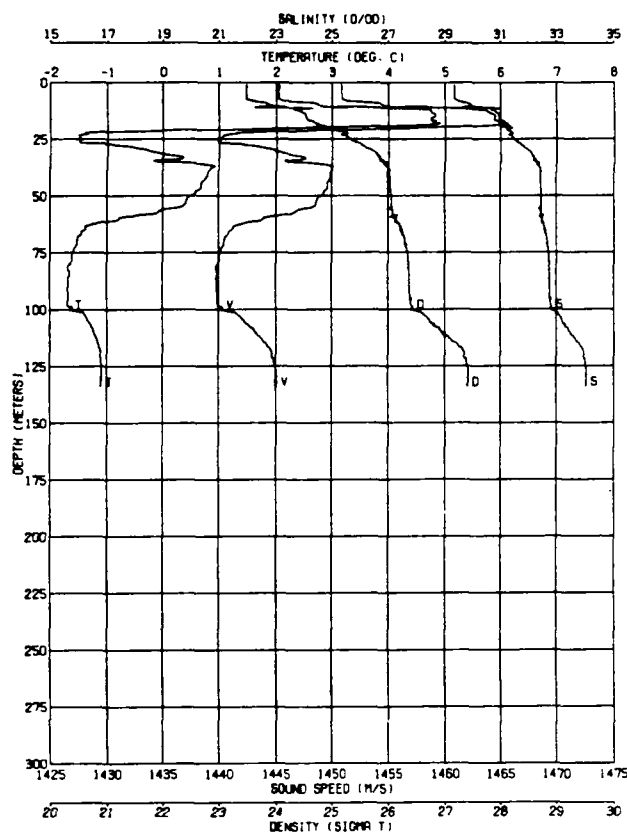
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
176	X		255	0948	Ship	71 38.9	156 6.6
177		X					

176



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.3	3.3	2.01	26.184	29.277	23.421	1450.6
8.5	8.4	2.91	27.500	30.040	23.866	1455.6
13.7	13.6	5.03	28.988	30.952	24.493	1465.8
18.8	18.7	2.87	28.105	30.800	24.573	1456.6
24.0	23.9	-1.50	25.253	31.527	25.377	1437.8
30.0	29.8	-0.48	26.434	32.056	25.776	1443.3
35.2	35.0	0.87	27.859	32.381	25.967	1450.6
40.4	40.2	0.80	27.725	32.386	25.981	1449.9
45.7	45.4	0.86	27.634	32.406	26.004	1449.4
51.0	50.7	0.54	27.548	32.420	26.022	1448.9
56.1	55.8	0.33	27.376	32.414	26.028	1448.0
61.4	61.0	-1.01	26.240	32.331	26.015	1441.8
67.8	67.2	-1.54	26.043	32.638	26.275	1439.7
73.8	73.3	-1.60	26.019	32.658	26.294	1439.6
79.1	78.6	-1.61	26.016	32.671	26.305	1439.6
82.2	81.7	-1.67	25.889	32.693	26.325	1439.4

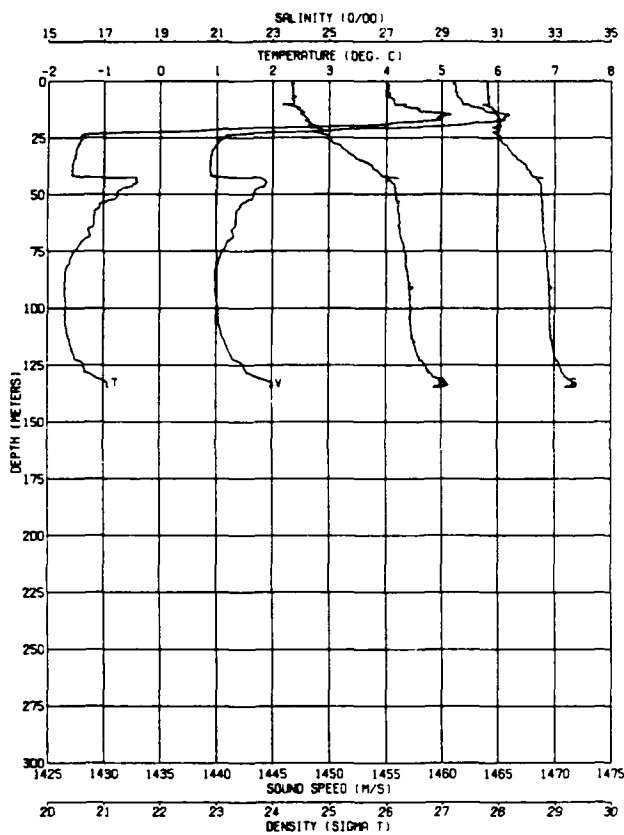
177



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/00)
5.2	2.04	1450.9	23.48	29.34
10.1	2.79	1454.6	23.92	29.96
15.3	4.81	1464.5	24.54	30.95
20.3	2.39	1456.9	25.09	31.43
25.4	-1.49	1440.1	25.34	31.49
30.1	-1.26	1444.9	25.71	31.98
35.0	-1.02	1446.0	25.90	32.23
40.2	.81	1449.9	26.03	32.44
45.1	.69	1449.7	26.04	32.45
50.2	.49	1449.0	26.05	32.46
55.3	.24	1448.1	26.06	32.45
60.2	-.78	1443.8	26.12	32.48
65.2	-1.41	1441.1	26.22	32.57
70.2	-1.53	1440.4	26.30	32.66
75.1	-1.62	1440.1	26.34	32.72
80.2	-1.66	1440.0	26.38	32.76
85.1	-1.67	1439.9	26.39	32.77
90.1	-1.69	1439.8	26.38	32.76
95.1	-1.69	1439.9	26.39	32.77
100.4	-1.62	1440.3	26.42	32.81
110.2	-1.23	1443.2	26.95	33.47
120.3	-1.11	1444.7	27.34	33.97
130.3	-1.10	1445.1	27.42	34.07
134.1	-1.11	1445.1	27.41	34.06

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
178		X	255	1130	Ship	71 35.2	156 32.5
179	X						

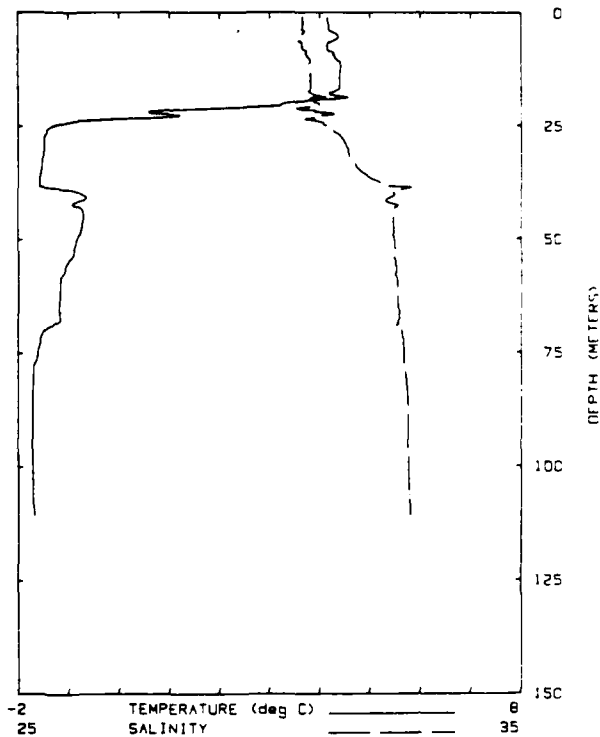
178



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	4.04	1461.3	24.35	30.63
10.4	4.15	1461.8	24.36	30.66
15.3	5.07	1465.9	24.54	30.99
20.4	2.46	1457.1	24.58	30.81
25.5	-1.40	1440.5	24.97	31.05
30.5	-1.50	1439.6	25.28	31.42
35.3	-1.55	1439.4	25.62	31.83
40.3	-1.57	1439.4	25.88	32.15
45.0	-1.42	1444.5	26.12	32.48
50.0	-1.76	1443.3	26.19	32.56
55.3	-1.08	1442.1	26.22	32.58
60.3	-1.17	1441.8	26.25	32.62
65.1	-1.27	1441.5	26.27	32.64
70.0	-1.34	1441.2	26.29	32.66
75.4	-1.55	1440.4	26.34	32.71
80.6	-1.63	1440.1	26.35	32.72
86.3	-1.70	1439.9	26.39	32.77
90.1	-1.70	1439.9	26.41	32.79
95.2	-1.70	1439.9	26.42	32.81
100.2	-1.69	1440.1	26.43	32.82
110.1	-1.66	1440.4	26.45	32.85
120.0	-1.53	1441.3	26.56	32.99
130.0	-1.17	1443.5	26.84	33.34
134.8	-0.92	1445.0	27.01	33.56

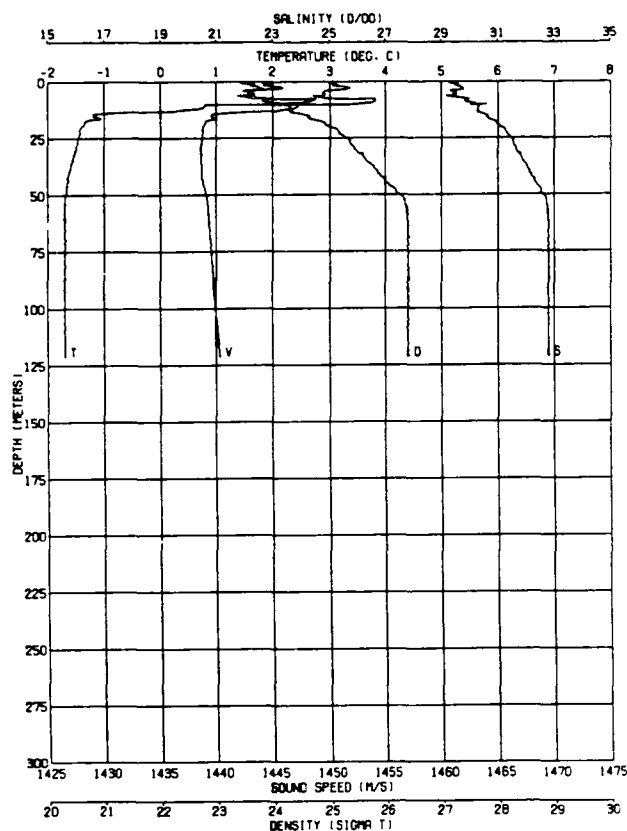
179



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
1.6	1.6	4.15	28.992	30.652	24.344	1461.6
7.0	6.9	4.16	28.994	30.642	24.335	1461.7
12.5	12.4	4.42	29.349	30.808	24.441	1463.1
17.9	17.8	4.20	29.192	30.825	24.475	1462.3
23.4	23.3	0.82	28.808	30.832	24.813	1447.8
30.0	29.8	-1.46	25.284	31.547	25.393	1438.0
36.8	36.6	-1.57	25.561	32.020	25.777	1436.3
43.7	43.5	-0.72	26.585	32.491	26.134	1443.1
50.5	50.2	-0.83	26.501	32.497	26.143	1442.7
57.3	57.0	-1.07	26.340	32.532	26.179	1441.7
64.3	63.9	-1.18	26.270	32.558	26.203	1441.3
71.2	70.7	-1.51	26.084	32.857	26.292	1440.0
78.0	77.6	-1.68	25.884	32.697	26.328	1439.3
84.8	84.4	-1.71	26.009	32.763	26.382	1439.4
91.5	90.9	-1.71	26.018	32.771	26.389	1439.5
97.7	97.1	-1.71	26.024	32.774	26.391	1439.6
104.4	103.7	-1.70	26.041	32.787	26.401	1439.8
110.9	110.2	-1.68	26.080	32.808	26.418	1440.0
117.3	116.5	-1.68	26.081	32.808	26.418	1440.0
111.1	110.4	-1.68	26.080	32.807	26.417	1440.0

Station Number 180
ASL Cast 181
APL Cast X
Julian Day 255
GMT hhmm 1350
Platform Ship
Latitude 71 25.7
Longitude 157 31.0

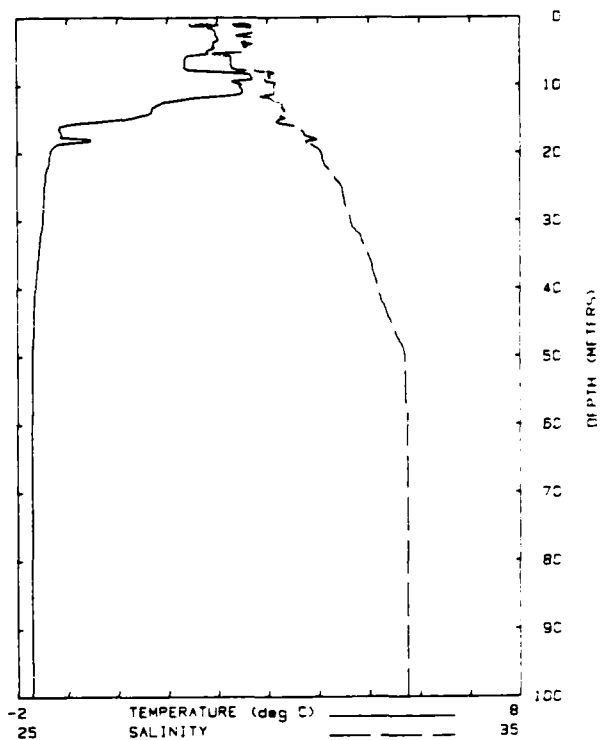
180



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	1.63	1449.4	23.57	29.44
10.3	1.91	1451.9	24.03	30.03
15.1	-1.20	1439.6	24.67	30.67
20.3	-1.41	1438.8	25.03	31.10
25.1	-1.47	1438.7	25.31	31.44
30.1	-1.49	1438.7	25.45	31.62
35.4	-1.57	1438.7	25.69	31.91
40.1	-1.62	1438.7	25.85	32.11
45.1	-1.66	1438.9	26.06	32.37
50.3	-1.69	1439.2	26.28	32.64
55.2	-1.70	1439.3	26.39	32.77
60.1	-1.70	1439.3	26.39	32.77
65.6	-1.69	1439.5	26.41	32.79
70.2	-1.69	1439.5	26.41	32.79
75.0	-1.70	1439.6	26.41	32.79
80.3	-1.70	1439.6	26.40	32.79
85.4	-1.70	1439.7	26.41	32.79
90.1	-1.70	1439.8	26.40	32.79
95.5	-1.70	1439.9	26.42	32.81
100.1	-1.70	1440.0	26.41	32.79
110.2	-1.70	1440.1	26.40	32.79
120.1	-1.70	1440.3	26.41	32.79
121.1	-1.70	1440.3	26.40	32.79

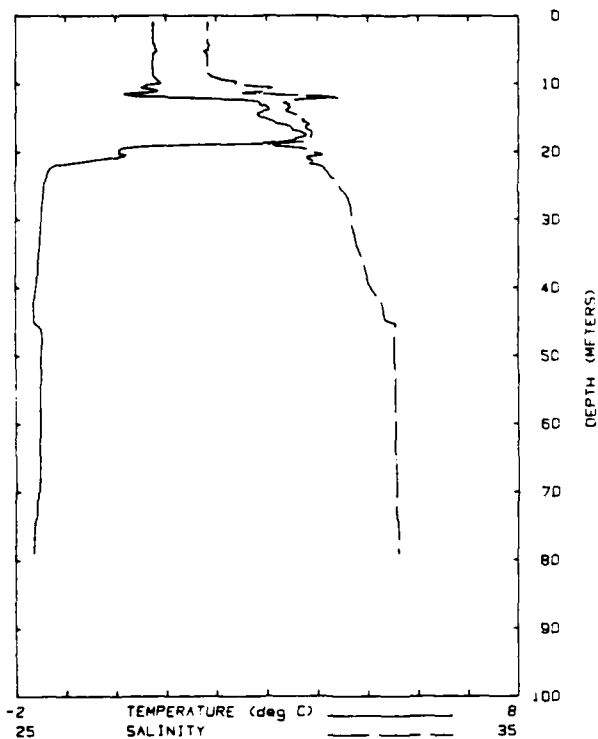
181



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.1	1.1	2.05	26.375	29.471	23.573	1451.0
4.2	4.2	1.94	26.330	29.520	23.618	1450.6
8.5	8.5	2.30	26.692	29.994	23.973	1452.9
14.7	14.6	0.44	25.757	30.531	24.289	1444.9
20.7	20.6	-1.35	25.043	31.088	25.018	1437.8
27.1	27.0	-1.47	25.270	31.514	25.369	1437.9
33.7	33.6	-1.56	25.477	31.894	25.675	1438.1
40.4	40.2	-1.64	25.835	32.201	25.925	1438.2
47.2	46.9	-1.68	25.861	32.548	26.208	1438.6
54.0	53.7	-1.71	25.864	32.716	26.344	1438.9
60.6	60.3	-1.71	25.893	32.758	26.378	1439.0
67.5	67.1	-1.71	26.000	32.781	26.381	1439.1
74.4	74.0	-1.71	26.003	32.781	26.380	1439.2
81.3	80.8	-1.71	26.006	32.780	26.379	1439.3
88.1	87.5	-1.71	26.009	32.759	26.379	1439.4
94.8	94.2	-1.71	26.012	32.759	26.379	1439.6
101.3	100.8	-1.71	26.015	32.759	26.379	1439.7
101.8	101.1	-1.71	26.016	32.780	26.380	1439.7

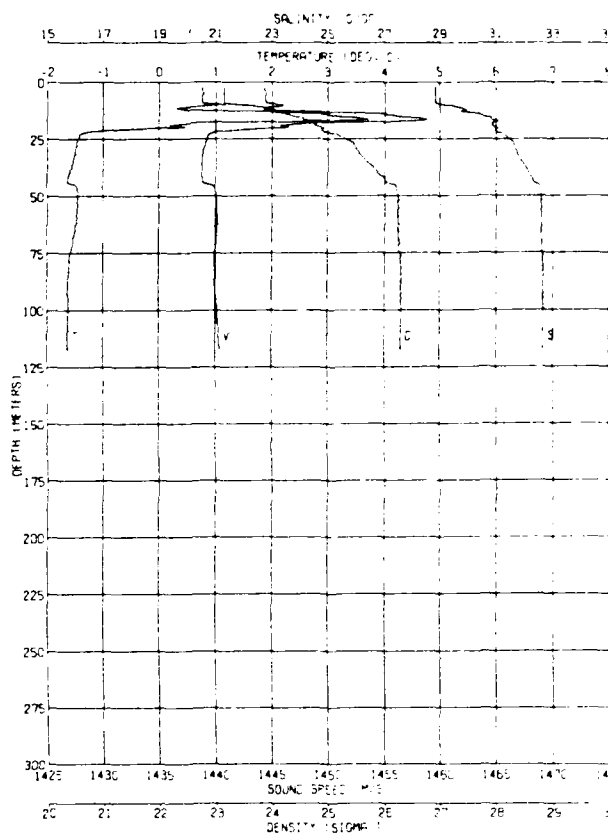
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
182	X		255	1504	Ship	71 21.2	157 57.8
183		X					

182



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.3	3.3	0.74	24.894	28.840	23.139	1444.3
8.5	8.5	0.74	24.887	28.827	23.129	1444.4
13.7	13.8	3.04	27.882	30.471	24.298	1456.8
19.0	18.9	2.89	27.506	30.055	23.978	1455.7
24.5	24.4	-1.40	25.224	31.388	25.262	1438.0
30.0	29.9	-1.48	25.376	31.885	25.504	1438.1
35.9	35.7	-1.55	25.482	31.889	25.671	1438.2
42.1	41.8	-1.83	25.874	32.240	25.857	1438.4
48.2	47.9	-1.46	26.028	32.535	26.182	1439.7
54.3	54.0	-1.50	26.006	32.550	26.205	1439.6
59.8	59.5	-1.51	26.008	32.557	26.211	1439.7
65.7	65.3	-1.52	26.007	32.562	26.215	1439.7
71.8	71.4	-1.56	25.968	32.575	26.226	1439.6
77.8	77.5	-1.63	25.967	32.625	26.269	1439.5
79.5	79.0	-1.63	25.967	32.622	26.267	1439.5
79.4	78.9	-1.64	25.966	32.626	26.269	1439.5

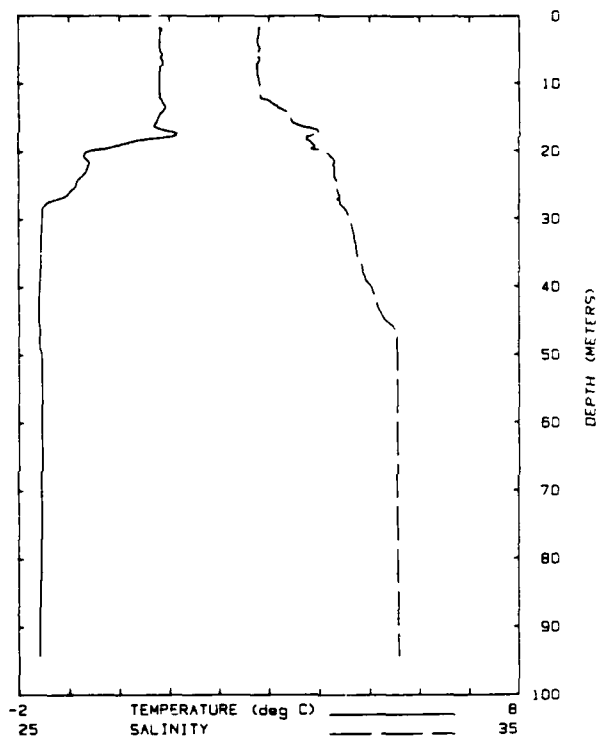
183



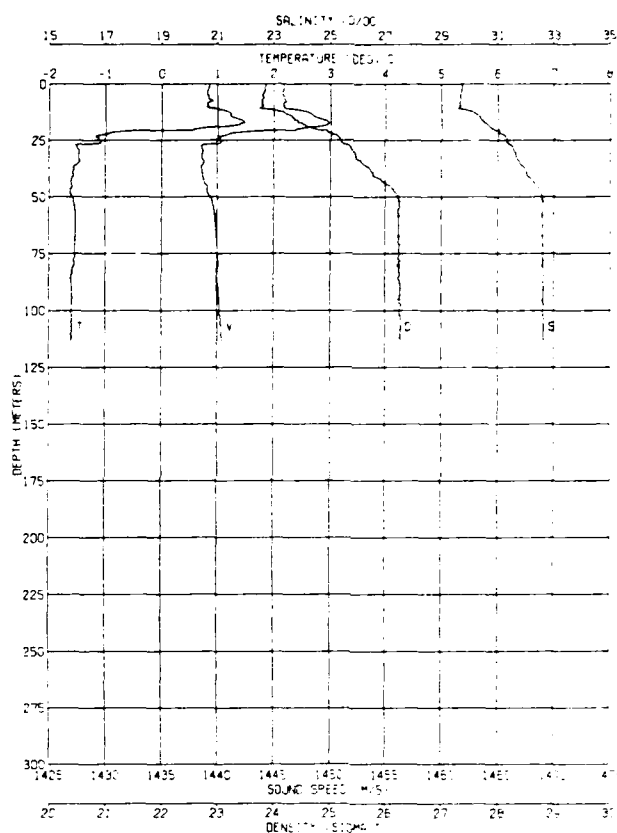
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	-0.79	1444.5	23.13	28.83
10.4	-0.83	1446.1	23.65	29.48
15.1	3.17	1456.3	24.38	30.55
20.3	-0.07	1445.6	24.94	31.06
25.4	-1.45	1439.2	25.34	31.49
30.1	-1.49	1438.8	25.51	31.69
35.7	-1.54	1438.7	25.72	31.95
40.1	-1.60	1438.8	25.88	32.15
45.3	-1.46	1439.8	26.21	32.56
50.2	-1.45	1440.0	26.24	32.60
55.3	-1.46	1440.1	26.26	32.62
60.1	-1.47	1440.1	26.24	32.60
65.3	-1.49	1440.1	26.24	32.59
70.2	-1.53	1440.1	26.27	32.63
75.0	-1.58	1439.9	26.27	32.63
80.3	-1.61	1439.9	26.29	32.65
85.5	-1.62	1439.9	26.30	32.66
90.1	-1.63	1440.0	26.30	32.66
95.1	-1.61	1440.1	26.31	32.67
100.1	-1.63	1440.2	26.31	32.68
110.1	-1.63	1440.3	26.30	32.67
117.5	-1.63	1440.4	26.30	32.66

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
184	X		255	1623	Ship	71 16.3	158 26.0
185		X					

184



185

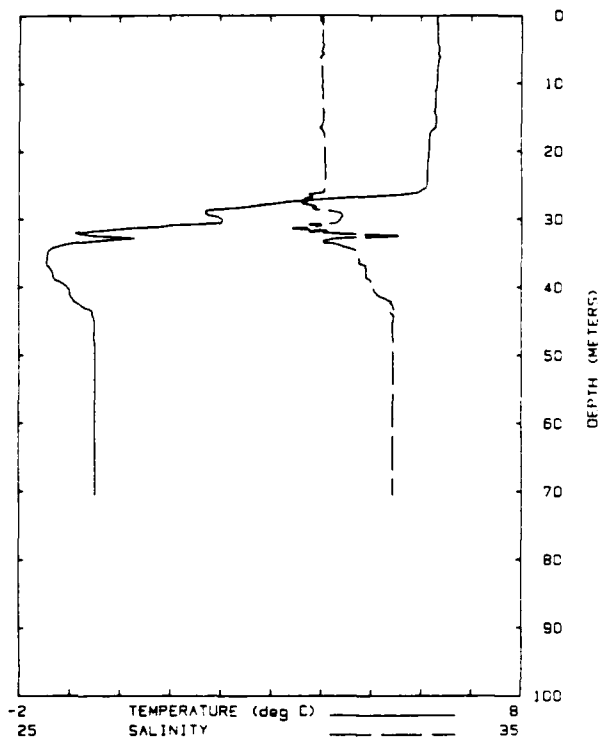


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.9	3.9	0.78	25.657	29.761	23.875	1445.8
8.6	8.6	0.80	25.676	29.780	23.890	1445.9
13.5	13.4	0.81	26.083	30.161	24.190	1447.0
18.7	18.6	0.30	26.115	30.628	24.755	1445.2
24.1	23.9	-0.78	25.651	31.315	25.187	1440.9
30.0	29.9	-1.53	25.277	31.595	25.432	1437.8
35.7	35.5	-1.57	25.371	31.758	25.565	1437.9
41.9	41.6	-1.80	25.618	32.128	25.865	1438.4
47.7	47.4	-1.59	25.941	32.556	26.212	1439.1
53.6	53.3	-1.54	25.978	32.552	26.208	1439.4
59.4	59.1	-1.54	25.982	32.555	26.210	1439.5
65.0	64.6	-1.54	25.990	32.556	26.211	1439.6
70.9	70.5	-1.54	25.992	32.560	26.214	1439.7
76.7	76.2	-1.55	25.992	32.567	26.219	1439.8
82.6	82.0	-1.55	25.993	32.569	26.221	1439.8
88.4	87.8	-1.58	25.985	32.581	26.231	1439.8
94.3	93.7	-1.58	25.984	32.584	26.235	1439.9
99.2	98.7	-1.59	25.983	32.586	26.236	1439.9

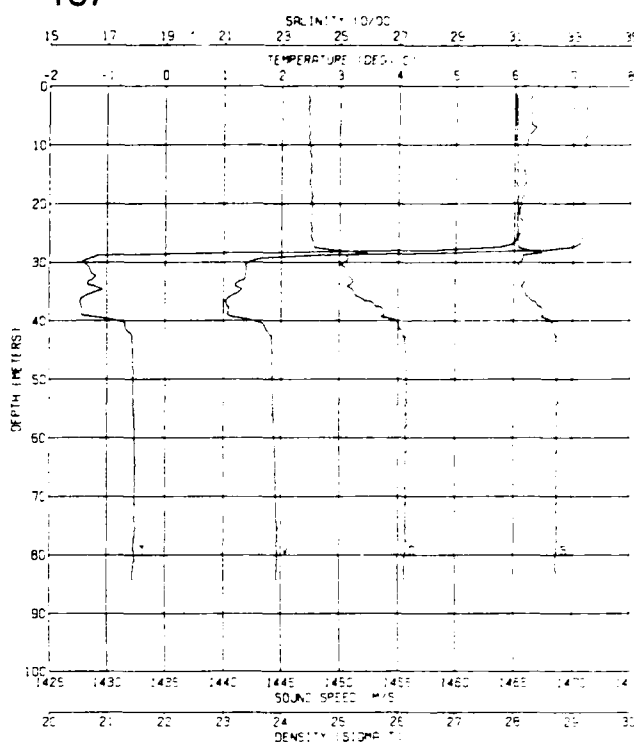
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (g/kg)
5.4	.84	1445.9	23.79	29.66
10.3	.81	1445.8	23.79	29.65
15.0	1.32	1448.8	24.33	30.35
20.3	.55	1447.0	24.76	30.86
25.1	-1.07	1440.4	25.21	31.33
30.1	-1.47	1438.7	25.43	31.59
35.1	-1.49	1438.8	25.58	31.78
40.5	-1.56	1438.7	25.78	32.02
45.0	-1.60	1439.1	26.09	32.40
50.2	-1.59	1439.4	26.22	32.57
55.1	-1.55	1439.7	26.25	32.61
60.1	-1.53	1439.8	26.24	32.59
65.4	-1.53	1439.9	26.24	32.59
70.2	-1.53	1440.0	26.23	32.58
75.1	-1.54	1440.0	26.25	32.60
80.1	-1.56	1440.1	26.26	32.62
85.4	-1.61	1439.9	26.24	32.59
90.4	-1.59	1440.1	26.26	32.62
95.3	-1.59	1440.1	26.24	32.59
100.6	-1.62	1440.1	26.25	32.60
110.6	-1.62	1440.3	26.26	32.61
113.9	-1.61	1440.4	26.26	32.62

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
186	X		255	1852	Ship	71 6.5	159 17.9
187		X					

186



187



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
0.7	0.7	6.32	31.102	31.039	24.410	1471.0
3.7	3.7	6.33	31.109	31.039	24.411	1471.0
9.2	9.2	6.32	31.105	31.040	24.414	1471.1
14.7	14.6	6.29	31.097	31.059	24.433	1471.1
20.5	20.4	6.15	31.016	31.092	24.475	1470.7
26.2	26.1	5.95	30.849	31.085	24.493	1470.0
31.1	31.0	1.07	26.888	31.044	24.889	1449.2
36.8	36.6	-1.45	25.467	31.785	25.504	1438.6
42.0	42.7	-0.77	26.510	32.444	26.096	1442.8
49.1	48.8	-0.48	26.737	32.440	26.085	1444.2
54.2	53.8	-0.49	26.736	32.438	26.083	1444.3
59.3	58.9	-0.48	26.738	32.438	26.083	1444.3
64.5	64.1	-0.48	26.745	32.436	26.083	1444.4
69.6	69.2	-0.48	26.743	32.432	26.078	1444.5
70.6	70.2	-0.48	26.750	32.439	26.083	1444.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/CO)
5.2	6.29	1471.2	24.46	31.07
10.7	6.21	1471.1	24.50	31.10
15.8	6.20	1471.1	24.50	31.10
20.4	6.11	1470.9	24.53	31.12
25.5	6.10	1470.9	24.49	31.07
30.3	-1.86	1440.7	25.32	32.47
35.1	-1.11	1442.2	25.00	32.10
40.3	-0.78	1443.7	25.90	32.20
45.5	-0.56	1444.7	26.00	32.34
50.4	-0.55	1444.5	26.05	32.39
55.3	-0.54	1444.5	26.10	32.45
60.5	-0.53	1444.6	26.10	32.46
65.4	-0.52	1444.6	26.11	32.47
70.3	-0.53	1444.6	26.11	32.47
75.4	-0.52	1444.7	26.14	32.50
80.5	-0.53	1444.7	26.12	32.48
84.4	-0.56	1444.7	26.13	32.49

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3/4

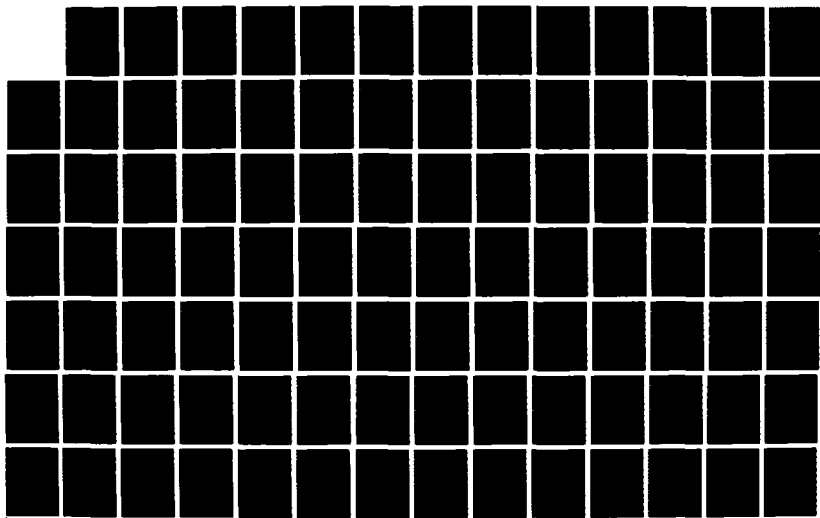
(U) WASHINGTON UNIV SEATTLE APPLIED PHYSICS LAB

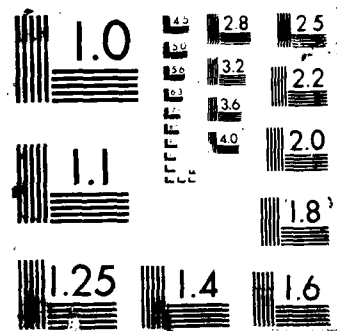
P BECKER ET AL. JUL 87 APL-UN-8705 N00024-85-C-6264

F/G 8/3

NL

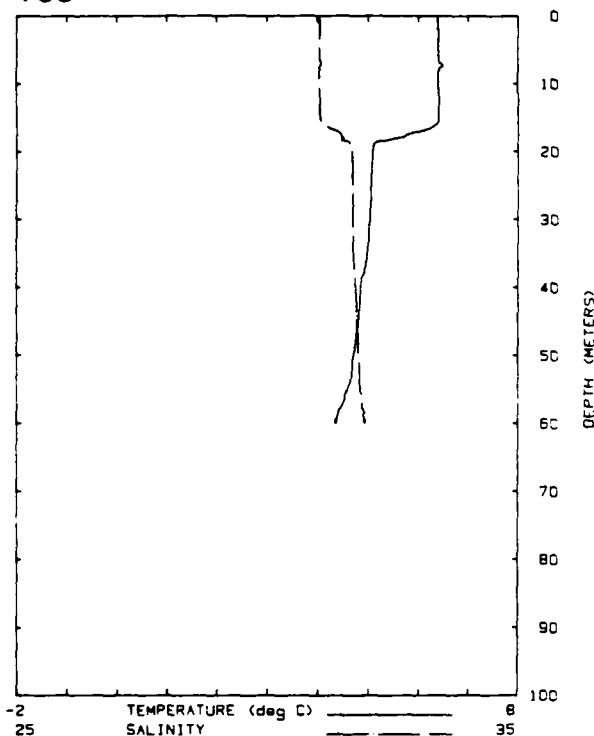
UNCLASSIFIED



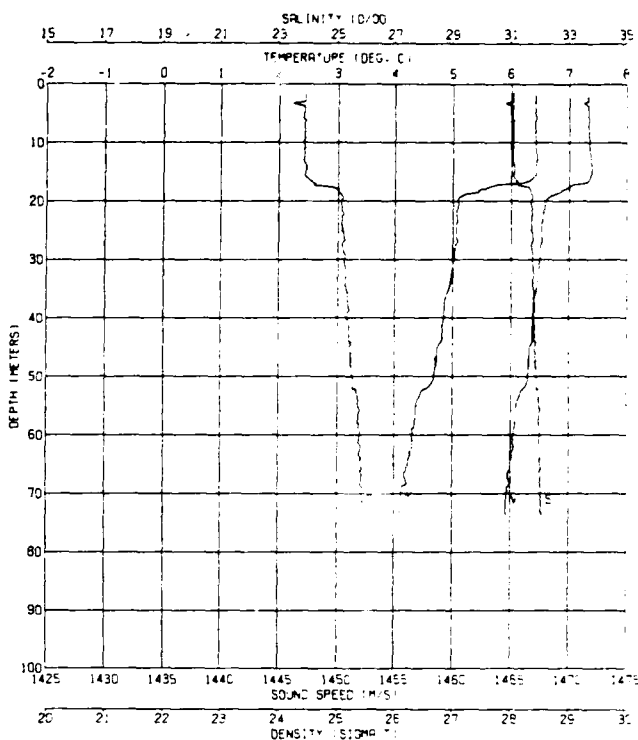


Station Number 188
ASL Cast X
APL Cast X
Julian Day 255
GMT hhmm 2026
Platform Ship
Latitude 71 1.3
Longitude 159 47.3

188



189



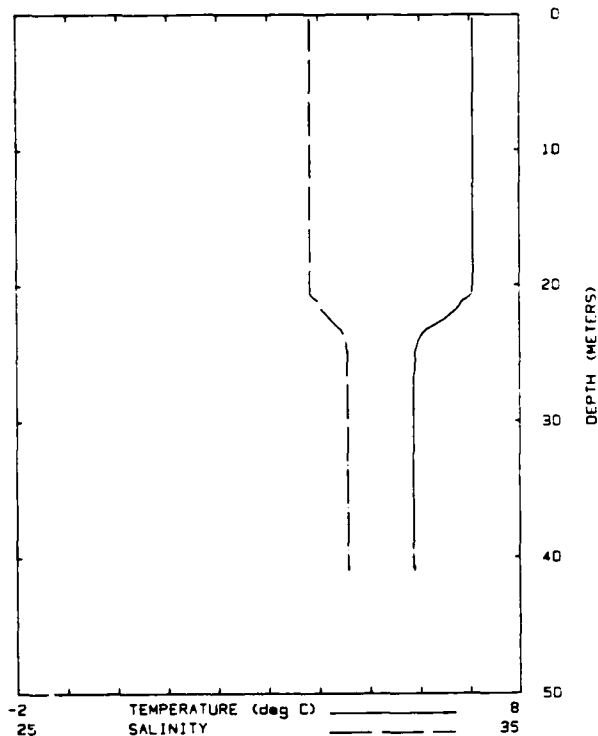
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.2	1.2	6.39	31.197	31.038	24.404	1471.2
4.9	4.9	6.40	31.186	31.040	24.404	1471.3
8.8	8.8	6.40	31.174	31.040	24.403	1471.4
15.9	15.9	6.39	31.185	31.078	24.435	1471.5
21.3	21.2	5.08	30.854	31.885	25.066	1467.1
27.5	27.4	5.05	30.839	31.893	25.076	1467.1
33.8	33.7	4.99	30.808	31.705	25.091	1467.0
38.7	38.4	4.88	30.539	31.736	25.128	1466.6
44.2	44.0	4.81	30.524	31.775	25.165	1466.5
49.3	49.0	4.73	30.493	31.805	25.199	1466.3
53.8	53.6	4.65	30.440	31.831	25.227	1466.0
58.8	58.4	4.40	30.305	31.916	25.320	1465.2
60.0	59.6	4.35	30.278	31.932	25.338	1465.0
60.1	59.7	4.35	30.283	31.936	25.341	1465.0

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

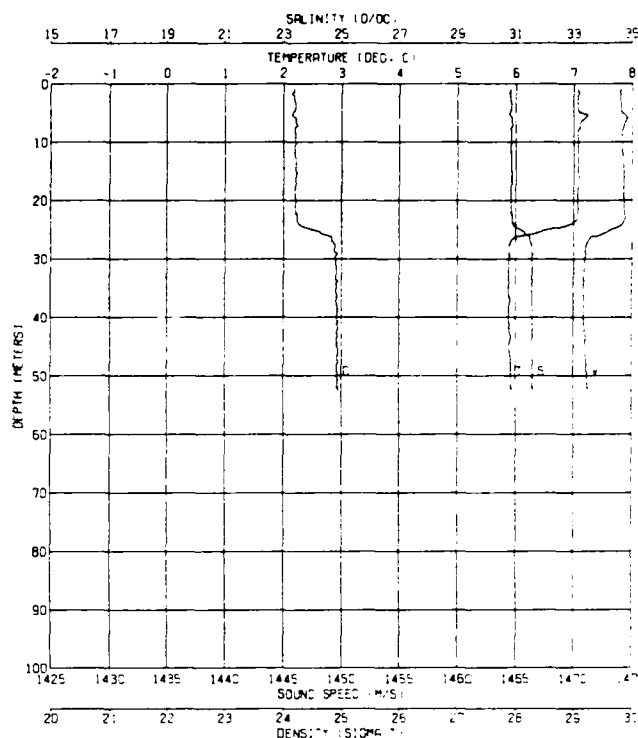
5.2	6.41	1471.7	24.43	31.03
10.7	6.41	1471.8	24.45	31.06
15.0	6.42	1471.9	24.46	31.08
20.5	5.10	1467.9	25.05	31.66
25.1	5.06	1467.6	25.07	31.67
30.3	5.01	1467.4	25.11	31.72
35.3	4.93	1467.2	25.15	31.75
40.1	4.86	1466.9	25.15	31.75
45.5	4.74	1466.6	25.22	31.81
50.0	4.67	1466.4	25.26	31.86
55.2	4.36	1465.4	25.35	31.94
60.2	4.30	1465.2	25.39	31.98
65.2	4.24	1465.0	25.42	32.01
70.2	4.13	1464.7	25.43	32.01
73.7	4.10	1464.6	25.49	32.08

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
190	X		255	2232	Ship	70 51.0	160 35.6
191		X					

190



191



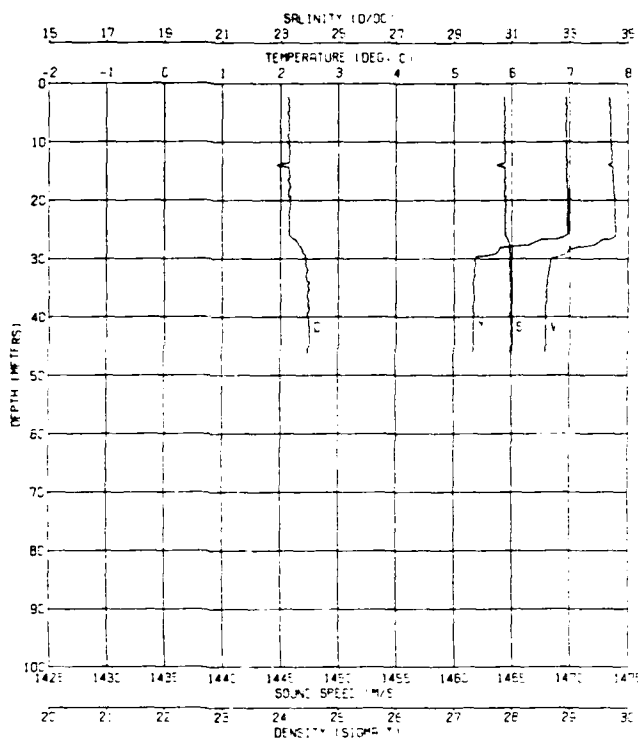
PRESSURE	DEPTH	TEMPERATURE	CONDUCTIVITY	SALINITY	DENSITY	SOUND VELOCITY
0.6	0.6	7.06	31.521	30.032	24.157	1473.6
2.0	2.0	7.06	31.525	30.031	24.155	1473.7
0.0	0.0	7.07	31.531	30.031	24.155	1473.8
14.4	14.3	7.07	31.533	30.031	24.155	1473.9
19.4	19.3	7.06	31.533	30.034	24.158	1473.9
25.7	25.6	6.90	31.234	31.561	24.074	1470.4
32.0	31.0	5.86	31.213	31.572	24.097	1470.3
38.3	38.1	5.86	31.216	31.573	24.099	1470.4
41.1	40.9	5.89	31.251	31.581	24.091	1470.6
41.0	40.0	5.89	31.248	31.581	24.091	1470.6

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	7.25	1474.5	24.15	30.79
10.4	7.08	1474.2	24.20	30.85
15.1	7.08	1474.3	24.22	30.86
20.3	7.07	1474.3	24.21	30.85
25.4	6.44	1472.9	24.62	31.30
30.5	5.88	1470.9	24.91	31.58
35.0	5.88	1470.9	24.92	31.59
40.1	5.88	1470.9	24.92	31.58
45.1	5.89	1471.0	24.93	31.60
50.2	5.92	1471.2	24.93	31.60
52.5	5.93	1471.2	24.93	31.61

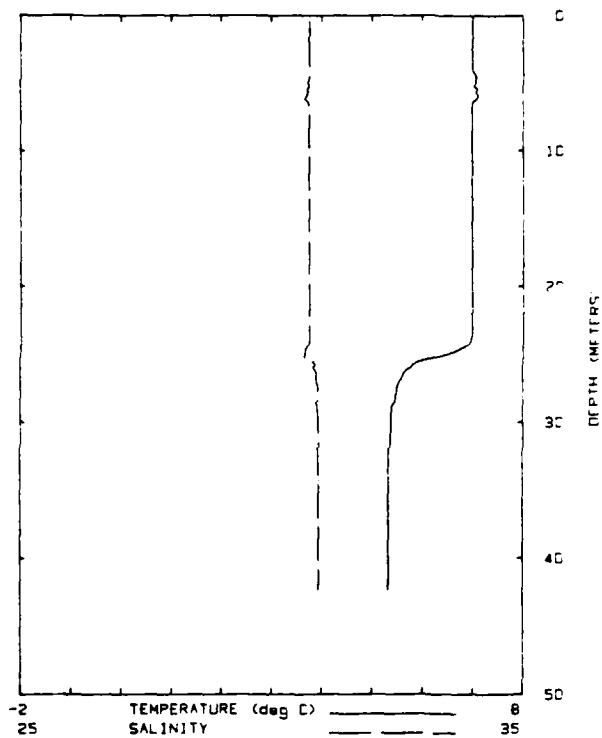
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
192		X	256	0205	Ship	70 49.0	160 14.3
193	X						

192



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.5	6.94	1473.5	24.14	30.75
10.3	6.95	1473.5	24.13	30.73
15.0	6.95	1473.6	24.16	30.77
20.3	6.97	1473.8	24.15	30.77
25.1	6.98	1473.9	24.16	30.77
30.3	5.35	1468.4	24.45	30.94
35.1	5.34	1468.1	24.46	30.95
40.5	5.34	1468.0	24.45	30.93
45.0	5.33	1468.0	24.47	30.95
46.4	5.34	1468.0	24.51	31.00

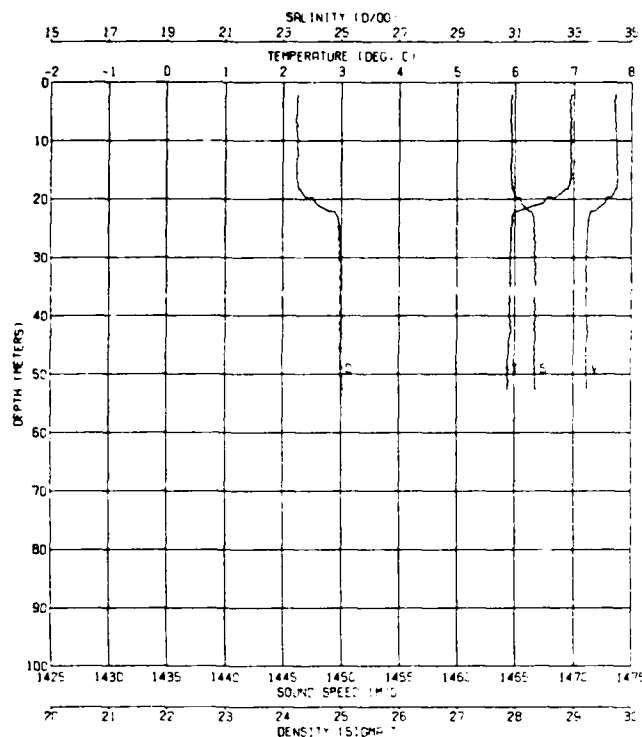
193



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
1.4	1.4	6.98	31.390	30.759	24.110	1473.2
0.8	0.8	6.98	31.390	30.758	24.108	1473.2
6.2	6.2	7.08	31.400	30.674	24.030	1473.6
11.6	11.6	6.98	31.385	30.757	24.108	1473.4
16.8	16.7	6.98	31.388	30.758	24.109	1473.5
22.3	22.2	6.98	31.402	30.762	24.112	1473.6
28.1	27.8	5.48	30.321	30.827	24.423	1467.5
33.6	33.4	5.33	30.323	30.850	24.457	1467.4
39.0	38.7	5.33	30.321	30.848	24.457	1467.5
42.4	42.1	5.33	30.321	30.847	24.456	1467.5
41.8	41.6	5.32	30.219	30.951	24.460	1467.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
194		X	256	0309	Ship	70 54.6	160 20.7
195	X						

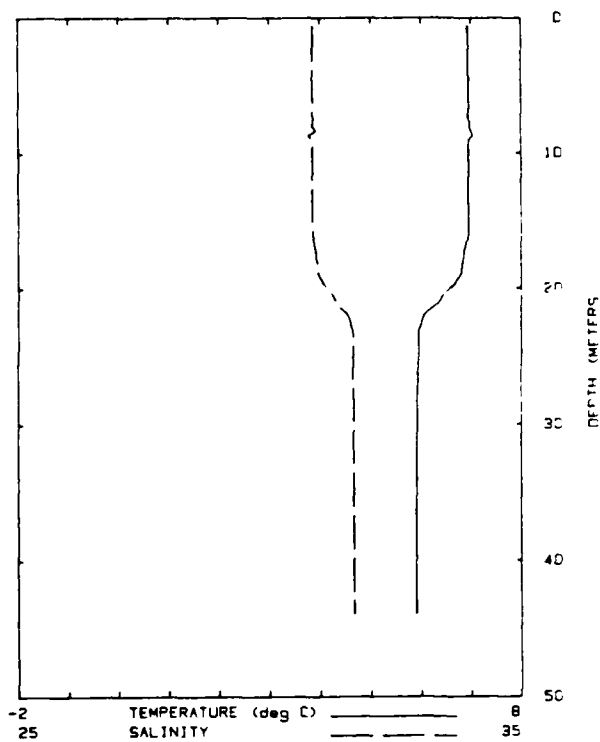
194



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.1	6.94	1473.6	24.25	30.88
10.1	6.97	1473.8	24.25	30.89
15.0	6.95	1473.8	24.23	30.86
20.4	6.50	1472.8	24.54	31.21
25.4	5.95	1471.3	24.99	31.69
30.3	5.92	1471.1	24.98	31.68
35.0	5.92	1471.1	24.98	31.67
40.1	5.91	1471.2	25.02	31.72
45.0	5.90	1471.2	25.00	31.69
50.0	5.88	1471.2	25.01	31.70
52.6	5.88	1471.2	25.01	31.70

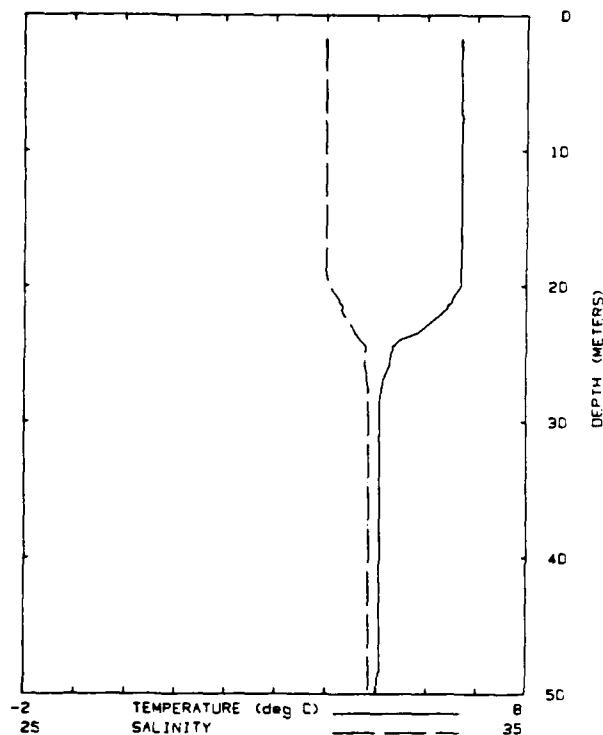
195



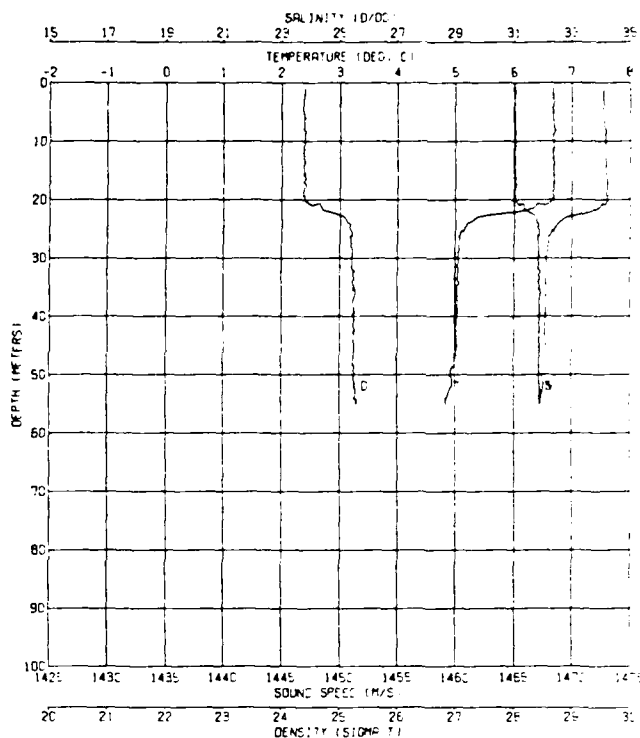
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.5	2.5	6.95	31.454	30.859	24.193	1473.2
7.7	7.6	6.98	31.484	30.864	24.193	1473.4
12.5	12.4	6.94	31.454	30.859	24.193	1473.4
17.5	17.4	6.50	31.458	30.935	24.264	1473.2
22.8	22.7	6.00	31.362	31.818	24.804	1470.8
28.3	28.1	5.91	31.334	31.863	24.853	1470.6
33.6	33.4	5.90	31.331	31.865	24.855	1470.6
38.8	38.5	5.90	31.331	31.868	24.859	1470.7
44.0	43.7	5.88	31.330	31.867	24.858	1470.8
44.2	43.8	5.88	31.330	31.868	24.858	1470.8

Station Number 196
 ASL Cast X
 APL Cast X
 Julian Day 256
 GMT hhmm 0347
 Platform Ship
 Latitude 70 57.7
 Longitude 160 23.2

196



197



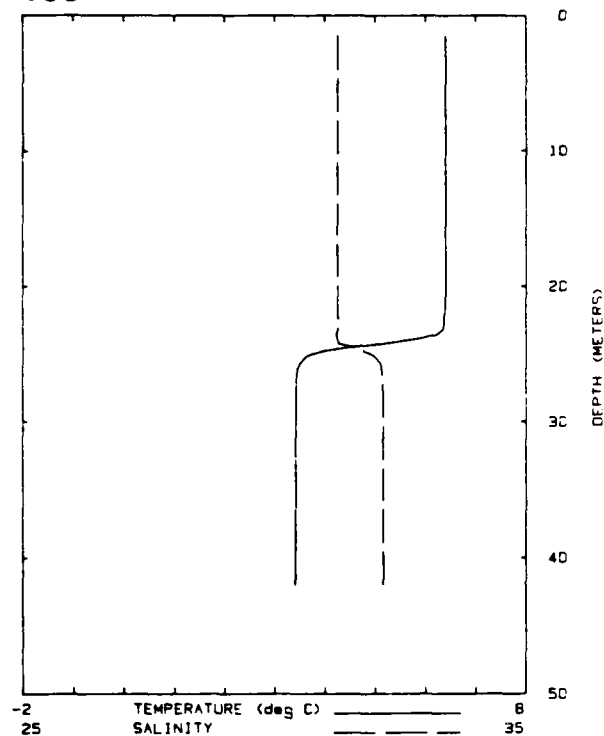
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.8	4.8	6.89	31.363	30.995	24.333	1472.4
10.3	10.2	6.88	31.367	30.999	24.337	1472.5
15.9	15.8	6.89	31.379	31.003	24.338	1472.6
21.4	21.3	6.50	31.462	31.268	24.571	1472.3
27.6	27.5	5.11	30.808	31.831	25.178	1467.5
33.3	33.2	5.06	30.786	31.847	25.195	1467.4
38.8	38.5	5.06	30.785	31.846	25.195	1467.5
45.3	45.1	5.06	30.781	31.848	25.197	1467.6
51.4	51.1	5.02	30.771	31.859	25.208	1467.6
51.4	51.1	5.03	30.782	31.836	25.190	1467.6

DEPTH (M) T (C) V (M/S) DENSITY S (C/1000)

5.2	6.69	1472.8	24.38	31.02
10.7	6.69	1472.9	24.39	31.03
15.5	6.69	1473.0	24.39	31.03
20.1	6.69	1473.1	24.40	31.04
25.1	5.15	1468.6	25.17	31.82
30.5	5.05	1467.9	25.17	31.81
35.4	5.03	1467.8	25.21	31.84
40.1	5.03	1467.8	25.23	31.87
45.3	5.04	1467.8	25.21	31.86
50.2	4.94	1467.5	25.25	31.88
55.1	4.84	1467.3	25.29	31.92
55.1	4.84	1467.3	25.29	31.92

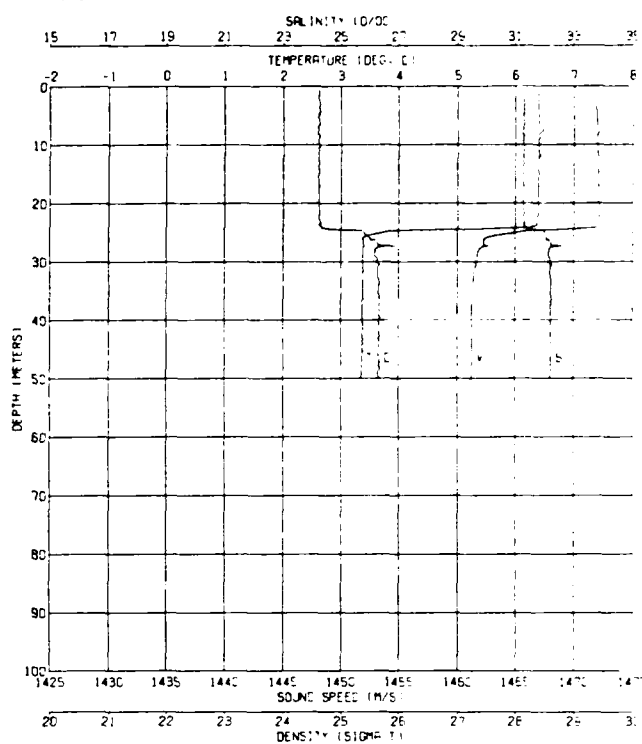
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
198	X		256	0421	Ship	71 0.5	160 26.8
199		X					

198



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
7.4	7.4	6.40	31.367	31.257	24.574	1471.7
12.6	12.7	6.40	31.374	31.259	24.576	1471.8
16.5	16.4	6.40	31.376	31.259	24.576	1471.9
23.6	23.6	6.21	31.193	31.231	24.578	1471.1
28.9	28.7	3.43	29.895	32.159	25.606	1460.9
34.2	34.0	3.42	29.895	32.165	25.612	1461.0
39.2	39.0	3.42	29.894	32.165	25.611	1461.1
41.8	41.7	3.42	29.894	32.165	25.612	1461.1

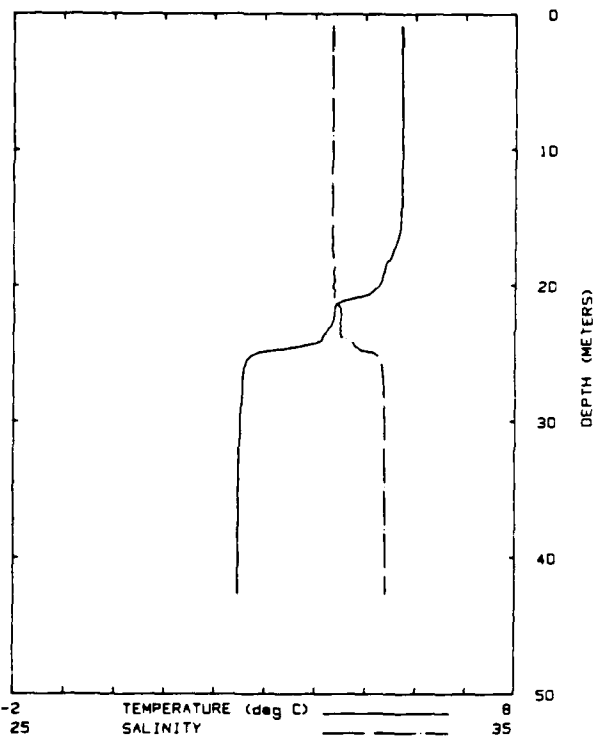
199



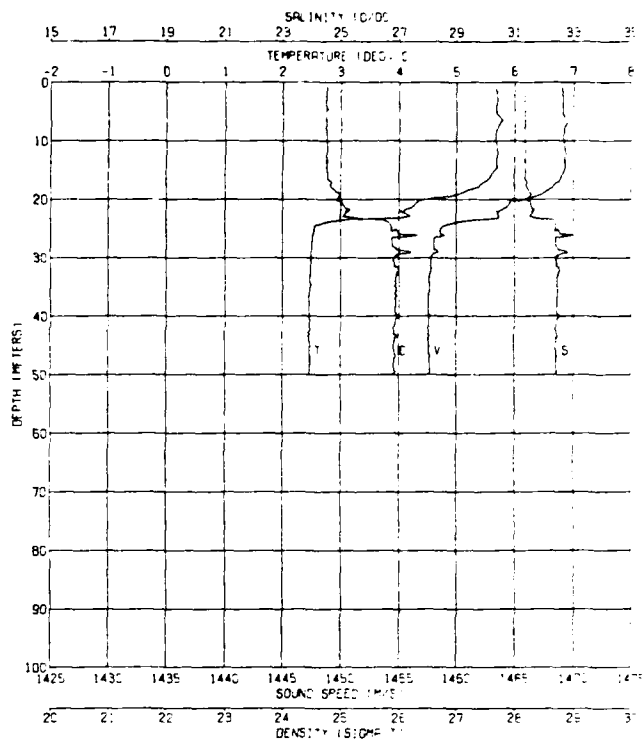
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/00)
5.2	6.41	1472.0	24.60	31.25
10.3	6.40	1472.1	24.64	31.31
15.1	6.41	1472.1	24.62	31.28
20.1	6.39	1472.2	24.65	31.31
25.9	3.25	1462.3	25.56	32.13
30.1	3.38	1461.8	25.56	32.11
35.0	3.38	1461.5	25.59	32.14
40.1	3.39	1461.4	25.61	32.15
45.0	3.37	1461.3	25.63	32.18
50.0	3.36	1461.4	25.68	32.24
50.0	3.36	1461.4	25.68	32.24

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
200	X		256	0455	Ship	71 4.1	160 28.2
201		X					

200



201

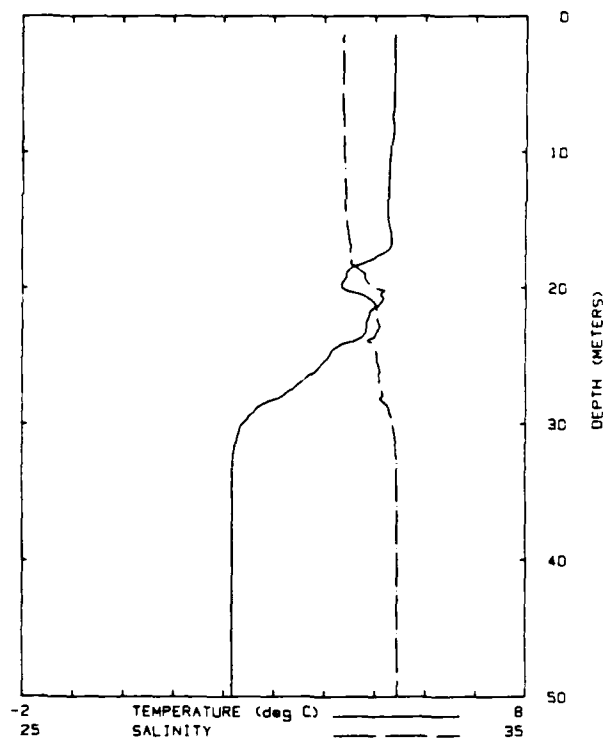


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.0	2.0	5.72	30.875	31.338	24.718	1469.0
4.3	4.2	5.72	30.872	31.339	24.721	1469.0
8.4	8.4	5.73	30.882	31.340	24.720	1469.1
15.2	15.1	5.70	30.871	31.347	24.729	1469.1
20.5	20.4	5.17	30.474	31.394	24.826	1467.1
25.5	25.4	2.87	29.187	32.277	25.765	1457.8
30.6	30.4	2.51	29.120	32.382	25.861	1457.3
36.1	35.9	2.48	29.106	32.398	25.877	1457.3
41.0	40.8	2.46	29.102	32.404	25.883	1457.3
42.6	42.4	2.46	29.104	32.406	25.884	1457.3

DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.2	5.69	1469.1	24.75
10.1	5.68	1469.2	24.76
15.3	5.65	1469.2	24.77
20.3	4.66	1465.9	24.78
25.2	2.53	1458.7	25.83
30.1	2.50	1458.1	25.87
35.4	2.48	1457.8	25.90
40.3	2.47	1457.7	25.92
45.1	2.49	1457.7	25.89
50.0	2.47	1457.7	25.92
50.0	2.47	1457.7	25.92

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
202	X		256	0527	Ship	71 6.1	160 33.8

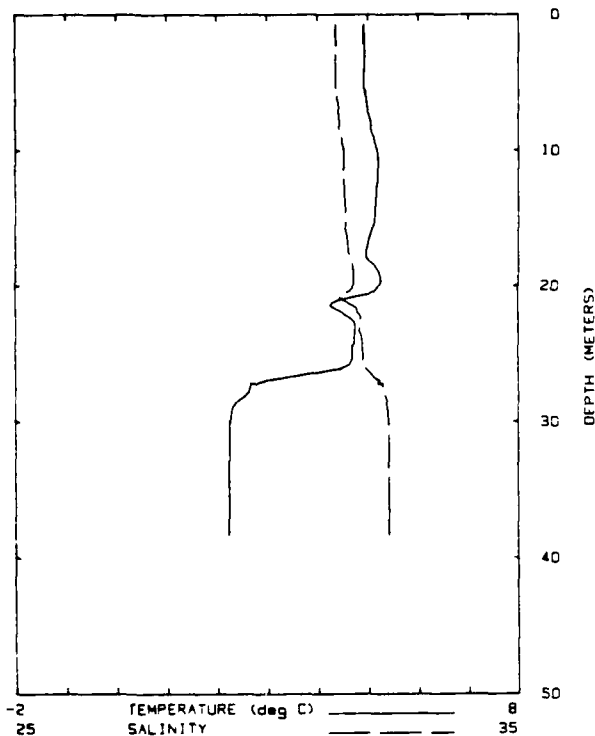
202



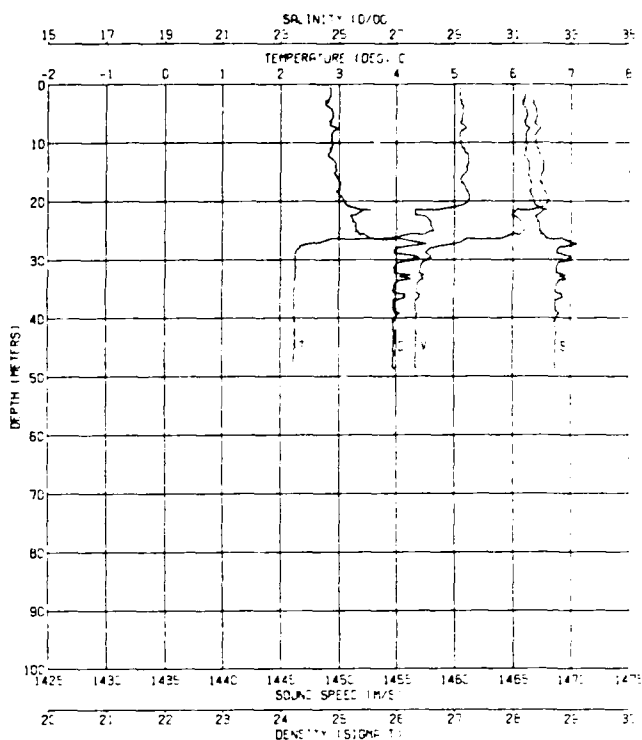
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.3	0.2	8.26	30.613	31.375	24.789	1467.7
13.6	13.5	5.25	30.560	31.416	24.834	1467.3
18.6	18.7	4.47	30.183	31.724	25.161	1464.6
24.3	24.1	4.36	30.286	31.958	25.357	1464.5
29.0	29.5	2.51	29.072	32.329	25.819	1457.2
34.8	34.6	2.17	28.694	32.444	25.937	1456.0
40.2	39.8	2.17	28.695	32.447	25.939	1456.0
45.6	45.3	2.17	28.687	32.447	25.939	1456.1
51.1	50.8	2.17	28.600	32.451	25.943	1456.2
52.3	52.0	2.17	28.601	32.451	25.943	1456.2

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
204	X		256	0559	Ship	71 8.9	160 37.1
205		X					

204



205



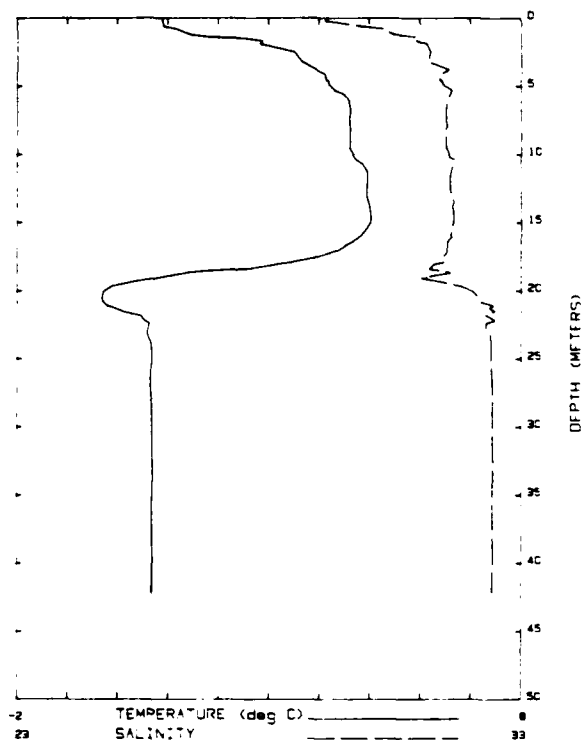
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
5.7	5.6	4.95	30.358	31.362	24.825	1465.9
10.3	10.2	5.19	30.594	31.518	24.922	1467.1
15.0	14.8	5.13	30.572	31.548	24.952	1467.0
19.8	19.7	5.25	30.813	31.706	25.063	1467.8
24.4	24.3	4.71	30.522	31.886	25.264	1465.9
28.7	28.5	2.40	28.018	32.372	25.862	1456.8
33.1	32.8	2.24	28.923	32.417	25.907	1456.2
37.0	36.8	2.23	28.920	32.414	25.908	1456.3
38.4	38.2	2.23	28.919	32.413	25.907	1456.3
38.5	38.2	2.23	28.918	32.413	25.908	1456.3

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

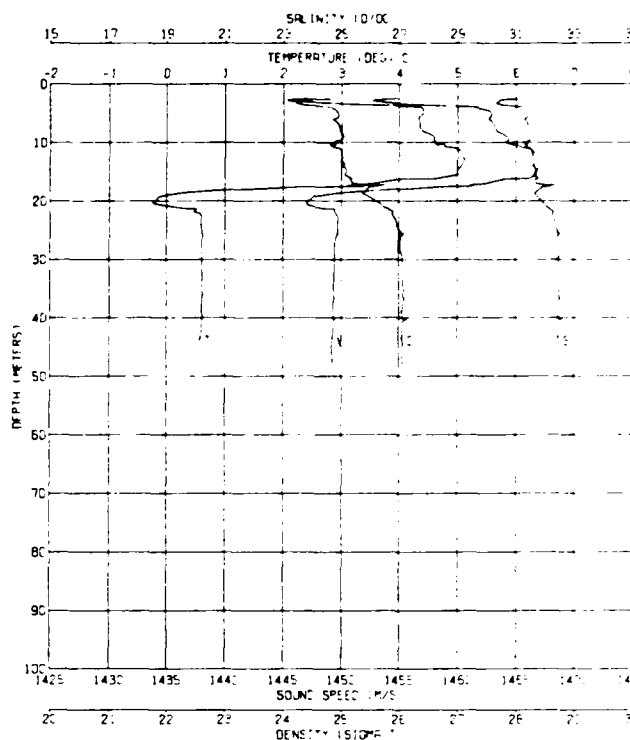
5.5	5.15	1467.1	24.91	31.48
10.3	5.11	1467.0	24.90	31.46
15.0	5.20	1467.5	24.93	31.51
20.4	5.20	1468.0	25.10	31.73
25.1	4.63	1465.9	25.29	31.89
30.1	2.26	1457.9	26.39	33.03
35.1	2.24	1456.7	25.94	32.46
40.2	2.24	1456.7	25.96	32.48
45.0	2.26	1456.7	25.94	32.46
48.7	2.24	1456.7	25.99	32.51

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
206	X		256	0630	Ship	71 11.6	160 40.1
207		X					

206



207

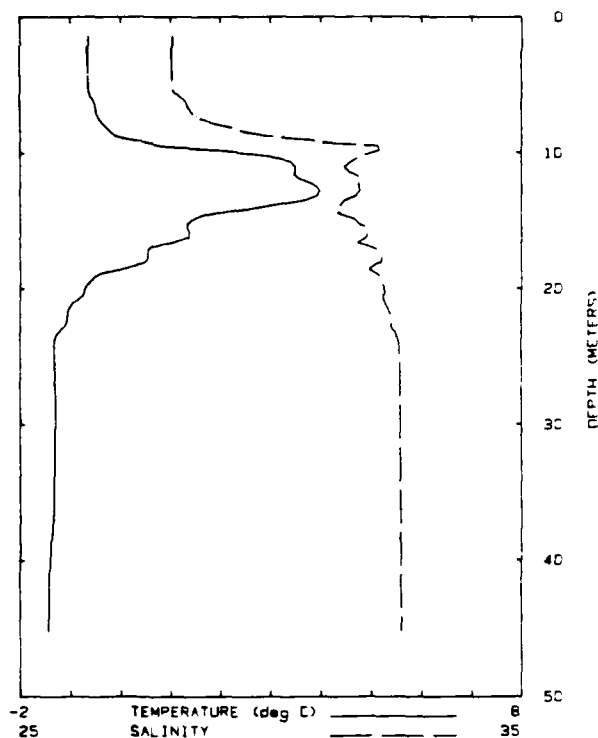


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
11.8	11.7	4.64	30.178	31.559	25.013	1463.1
17.1	17.0	5.00	30.581	31.851	25.047	1466.7
22.1	22.0	-0.28	28.801	32.084	25.774	1444.2
27.4	27.3	0.68	27.642	32.411	26.007	1445.1
33.0	32.8	0.89	27.686	32.428	26.021	1445.3
38.9	38.7	0.89	27.686	32.436	26.027	1449.4
44.2	44.0	0.67	27.654	32.434	26.026	1449.4
44.3	44.0	0.68	27.670	32.435	26.026	1449.5

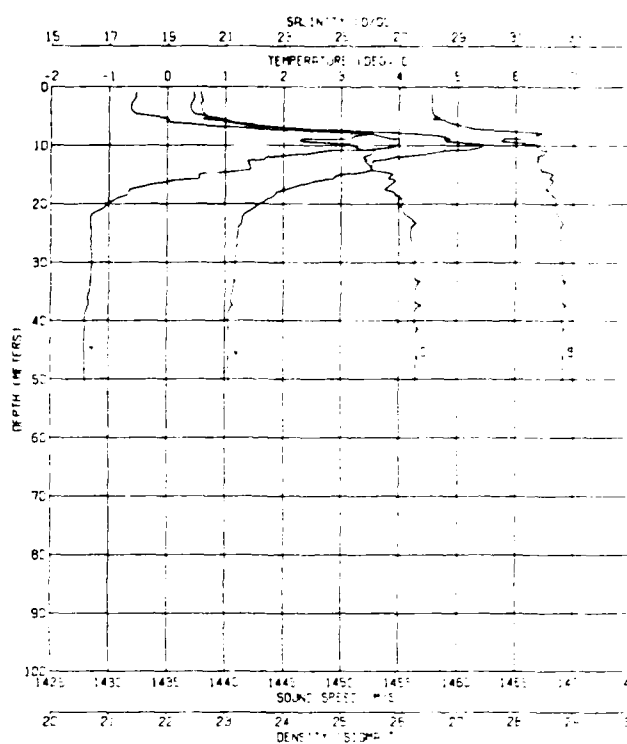
DEPTH (M)	T (C)	V (M/S)	DENSITY S (C/00)
5.2	4.50	1463.1	24.88
10.1	4.62	1464.2	24.95
15.0	5.02	1466.8	25.12
20.4	-0.32	1447.0	25.68
25.1	.61	1450.0	25.95
30.2	.62	1449.6	25.97
35.3	.62	1449.5	26.04
40.1	.62	1449.5	26.02
45.3	.57	1449.3	26.04
48.5	.58	1449.4	26.06

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
208	X	X	256	0713	Helo	71 16.7	160 42.8
209							

208



209



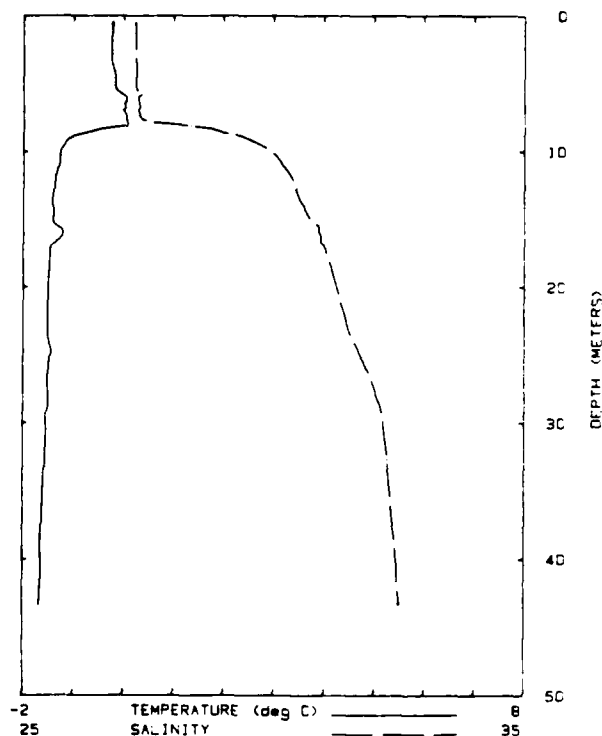
PRESSURE dbar	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.2	2.2	-0.84	23.277	28.033	22.537	1436.8
5.9	5.9	-0.59	23.432	28.191	22.663	1437.7
12.0	11.9	3.57	29.501	31.608	25.315	1441.8
17.8	17.7	0.54	27.378	32.215	25.857	1446.1
23.3	23.2	-1.23	26.181	32.478	26.139	1446.3
28.2	28.1	-1.28	26.182	32.575	26.220	1446.3
35.2	35.0	-1.33	26.164	32.586	26.229	1446.2
41.2	41.0	-1.41	26.106	32.588	26.242	1435.9
45.3	45.1	-1.43	26.102	32.604	26.247	1435.9
45.2	44.9	-1.43	26.102	32.602	26.245	1435.9

DEPTH (M) T (C) V (M/S) DENSITY S (D/1000)

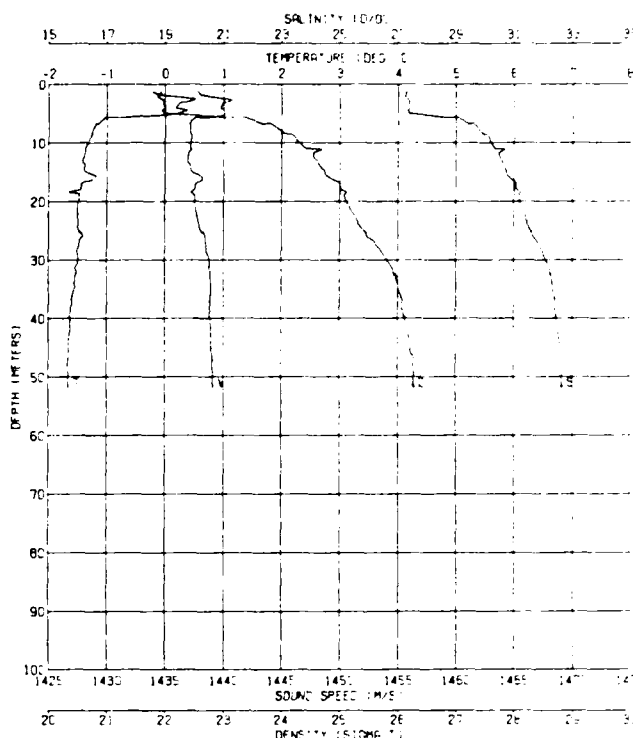
5.4	-1.12	1439.2	22.69	28.48
10.1	3.97	1461.9	25.31	31.82
15.1	.48	1449.6	25.88	32.26
20.3	-1.05	1442.9	25.98	32.30
25.2	-1.30	1441.3	26.11	32.44
30.2	-1.30	1441.1	26.16	32.53
35.0	-1.34	1440.8	26.20	32.55
40.3	-1.42	1440.4	26.22	32.57
45.1	-1.43	1440.3	26.23	32.59
50.4	-1.42	1440.4	26.26	32.62
50.4	-1.42	1440.4	26.26	32.62

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
210	X		256	1447	Helo	71 36.9	159 7.3
211		X					

210



211

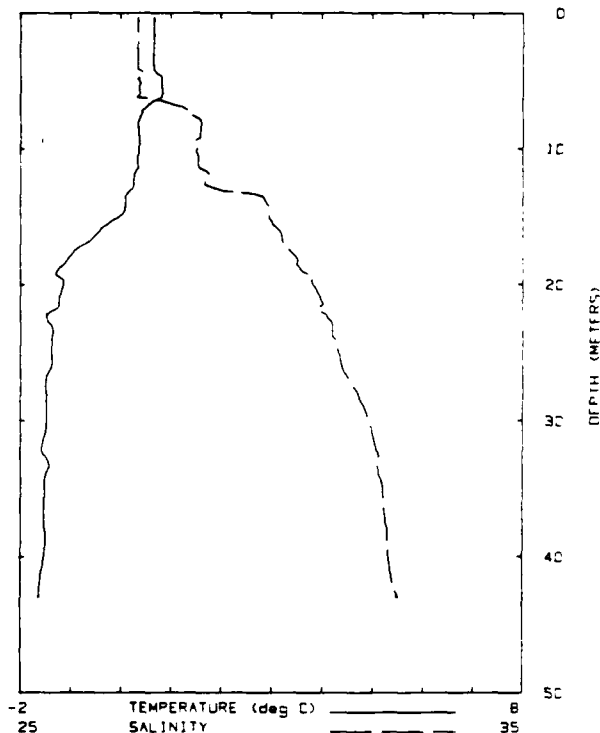


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.6	0.6	-0.21	22.871	27.243	21.891	1437.7
0.7	0.7	-0.22	22.867	27.244	21.891	1437.7
4.5	4.5	-0.16	23.018	27.255	21.899	1438.0
8.7	8.7	-1.20	24.207	28.806	23.979	1438.6
14.9	14.9	-1.40	24.720	30.699	24.705	1437.0
20.0	19.9	-1.50	25.038	31.242	25.146	1437.3
25.8	25.5	-1.48	25.453	31.783	25.584	1438.2
31.5	31.3	-1.55	25.728	32.230	25.947	1438.6
37.0	36.8	-1.62	25.768	32.380	26.053	1438.5
42.3	42.1	-1.65	25.833	32.477	26.149	1438.6
43.5	43.3	-1.66	25.848	32.513	26.179	1438.6
43.6	43.3	-1.66	25.849	32.515	26.180	1438.6

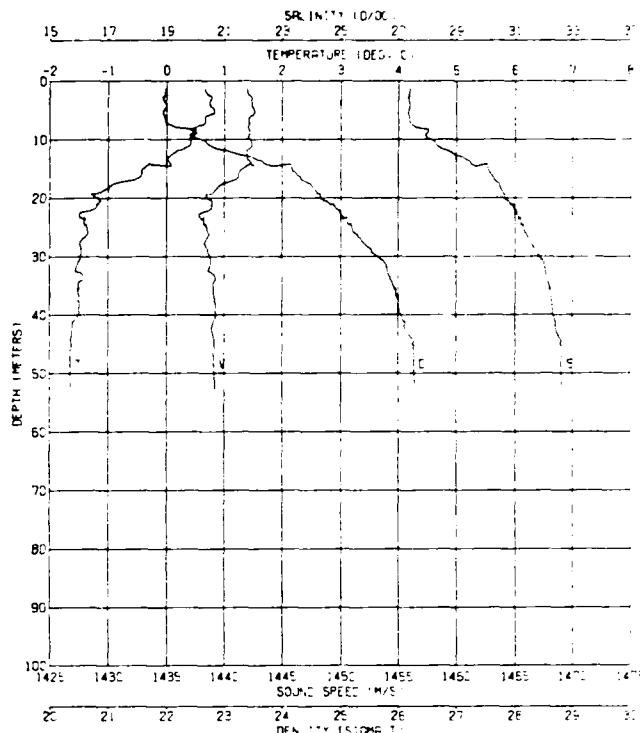
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	-0.01	1440.1	22.51	28.02
10.3	-1.33	1437.1	24.34	30.25
15.3	-1.27	1437.6	24.74	30.75
20.1	-1.49	1437.5	25.12	31.21
25.4	-1.47	1438.1	25.42	31.58
30.1	-1.49	1438.8	25.81	32.06
35.1	-1.56	1438.9	26.01	32.31
40.5	-1.62	1438.9	26.12	32.44
45.0	-1.66	1438.9	26.21	32.56
50.2	-1.66	1439.1	26.27	32.62
51.6	-1.66	1439.1	26.28	32.63

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
212	X		256	1555	Ship	71 31.5	159 2.2
213		X					

212



213

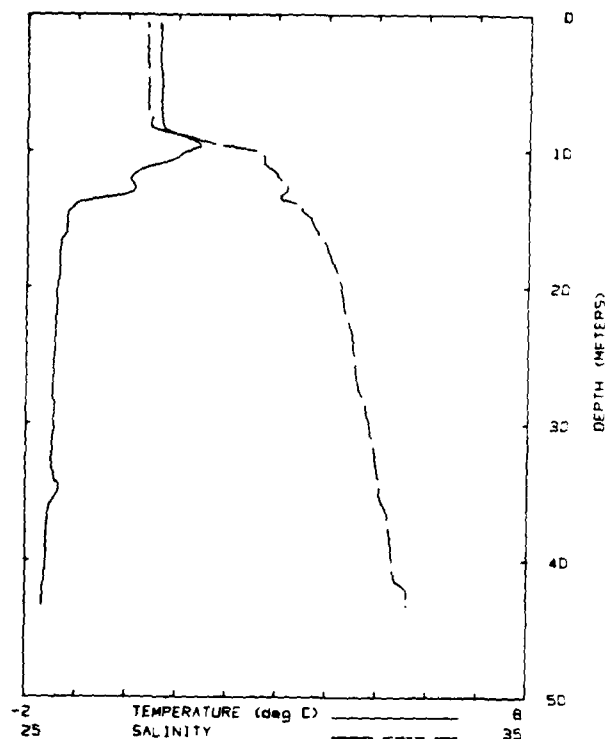


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
0.7	0.7	0.67	23.864	27.349	21.947	1442.0
2.3	2.3	0.66	23.861	27.348	21.947	1442.0
7.5	7.5	0.43	24.297	28.385	22.772	1442.3
12.7	12.7	0.28	24.422	28.679	23.030	1442.0
17.9	17.9	-0.97	24.861	30.447	24.492	1438.7
23.1	23.0	-1.38	25.113	31.218	25.124	1437.9
28.5	28.4	-1.47	25.432	31.740	25.548	1438.2
34.8	34.6	-1.52	25.723	32.195	25.918	1438.7
41.0	40.8	-1.56	25.814	32.357	26.050	1438.9
43.2	43.0	-1.64	25.863	32.510	26.176	1438.7

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/CC)
5.1	.83	1442.6	21.96	27.36
10.1	.40	1442.2	22.67	28.23
15.3	-.40	1441.7	24.10	29.99
20.4	-1.16	1438.9	24.72	30.72
25.5	-1.36	1438.7	25.16	31.27
30.3	-1.47	1439.0	25.65	31.87
35.3	-1.52	1439.1	25.92	32.18
40.1	-1.50	1439.4	26.03	32.33
45.0	-1.65	1439.2	26.23	32.58
50.2	-1.65	1439.2	26.26	32.62
52.7	-1.65	1439.2	26.27	32.63

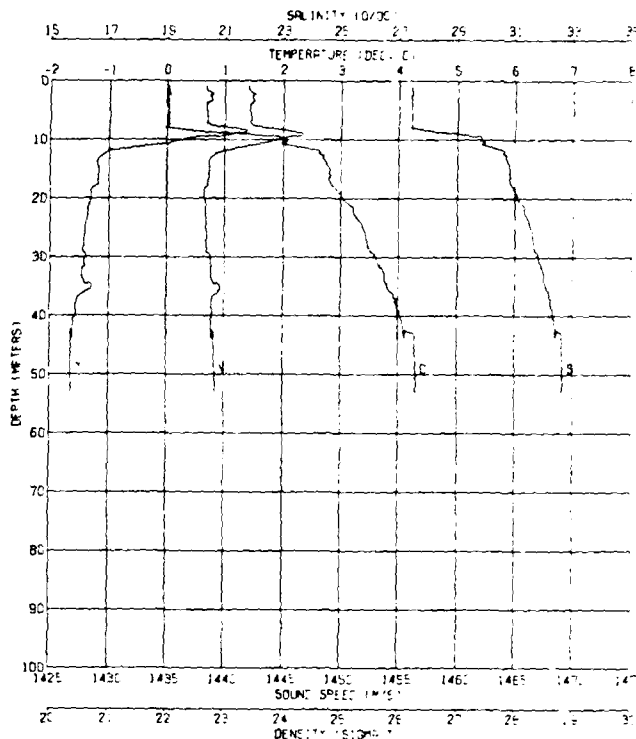
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
214	X		256	1647	Ship	71 28.1	158 59.5
215		X					

214



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
2.5	2.5	0.85	22.894	27.400	21.985	1442.0
7.0	7.0	0.66	23.709	27.405	21.992	1442.1
12.0	11.9	0.11	25.341	30.011	24.105	1442.1
17.0	16.9	-1.32	24.890	30.986	24.937	1437.8
22.1	22.0	-1.39	25.228	31.382	25.257	1438.1
28.0	27.9	-1.47	25.391	31.881	25.501	1438.2
33.8	33.7	-1.44	25.656	32.014	25.770	1438.9
39.9	39.7	-1.58	25.743	32.284	25.891	1438.6
43.5	43.1	-1.86	25.830	32.621	26.266	1438.8
43.5	43.3	-1.86	25.930	32.821	26.266	1438.8

215

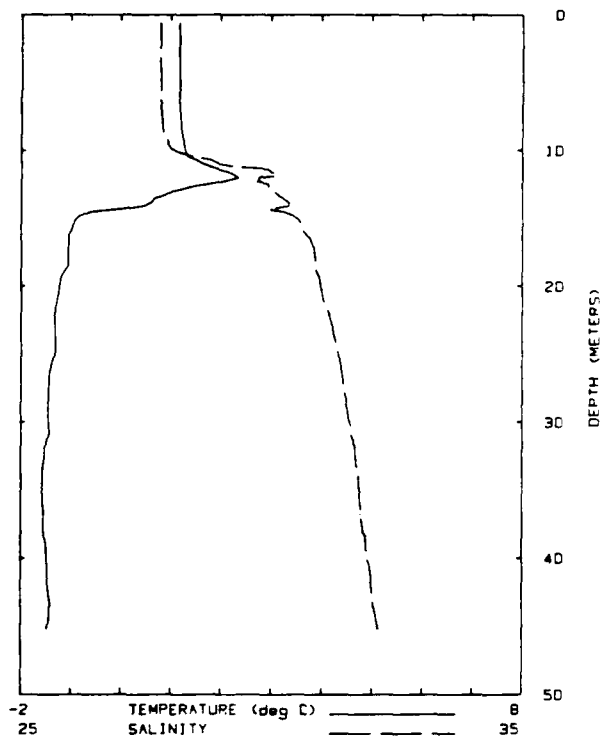


DEPTH (M) T (C) V (M/S) DENSITY S (10/00)

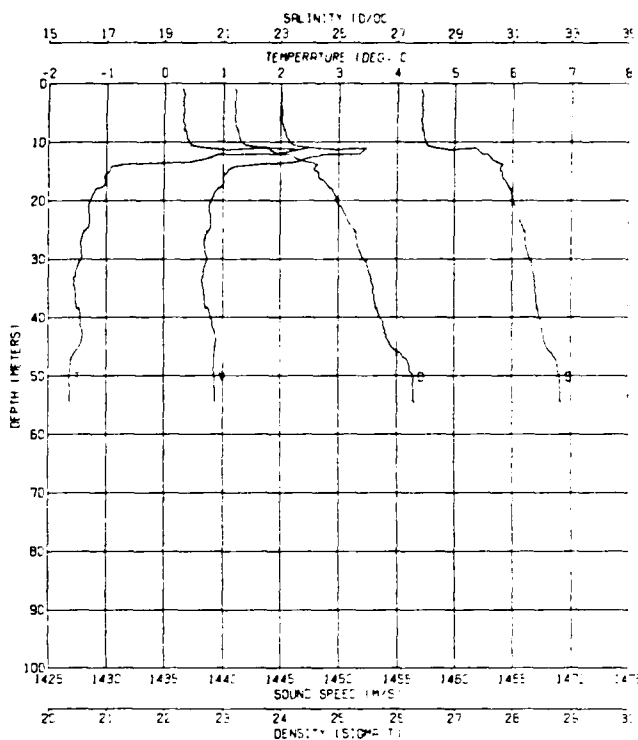
5.1	.68	1442.1	22.02	27.43
10.4	.08	1443.7	24.09	29.99
15.1	-1.19	1438.7	24.82	30.84
20.3	-1.32	1438.3	25.06	31.14
25.2	-1.42	1438.4	25.40	31.55
30.1	-1.42	1438.8	25.60	31.80
35.5	-1.32	1439.7	25.83	32.09
40.2	-1.59	1439.0	26.04	32.34
45.0	-1.65	1439.1	26.29	32.65
50.3	-1.65	1439.2	26.32	32.69
53.0	-1.65	1439.3	26.33	32.70

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
216	X		256	1723	Ship	71 25.1	158 56.2
217		X					

216



217



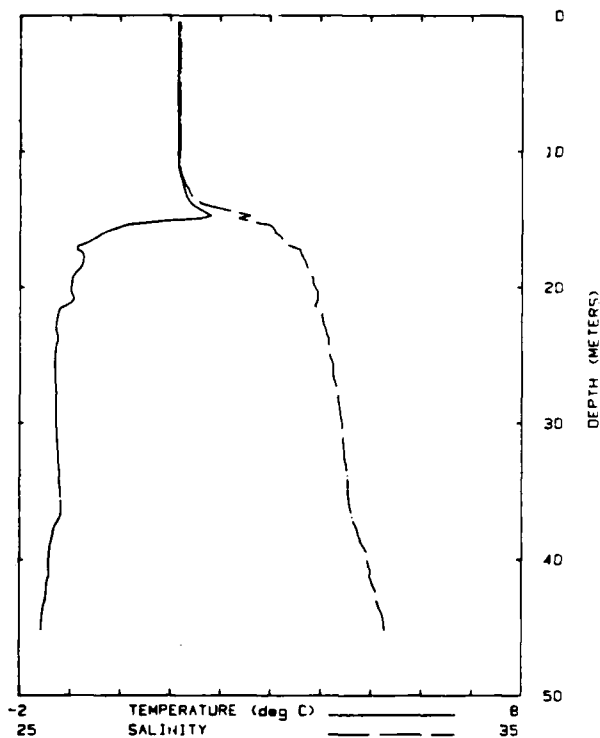
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.7	2.7	1.17	24.371	27.780	22.279	1444.9
7.8	7.7	1.21	24.442	27.839	22.318	1445.2
12.8	12.7	1.42	25.284	28.961	24.002	1449.0
18.2	18.1	-1.05	25.116	30.878	24.841	1438.9
23.3	23.3	-1.30	25.188	31.235	25.136	1438.3
28.9	28.7	-1.44	25.276	31.497	25.351	1438.1
35.0	34.8	-1.58	25.355	31.745	25.555	1437.9
41.1	40.8	-1.47	25.806	31.869	25.734	1438.8
45.3	45.1	-1.47	25.732	32.137	25.870	1439.1
45.5	45.2	-1.47	25.732	32.137	25.870	1439.1

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

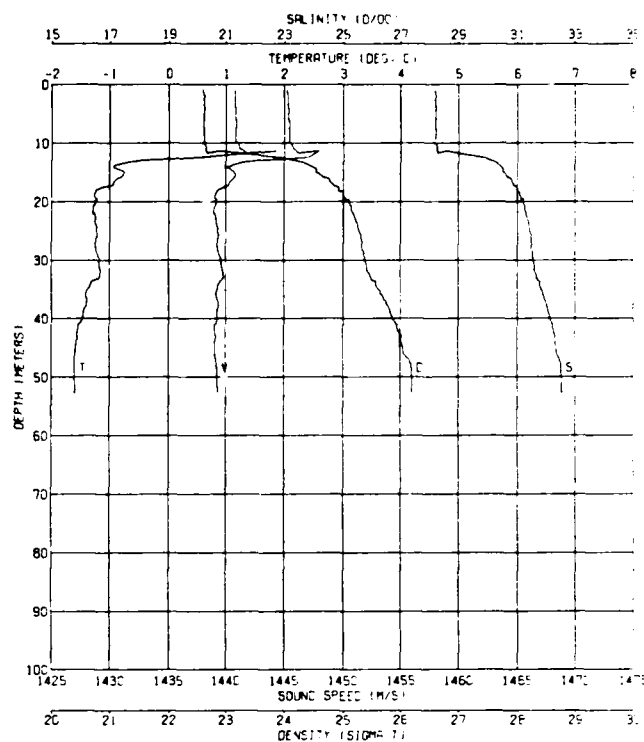
5.1	1.22	1445.1	22.33	27.85
10.5	1.39	1446.1	22.47	28.04
15.1	-0.97	1440.4	24.66	30.66
20.3	-1.28	1438.9	24.98	31.05
25.4	-1.39	1438.7	25.28	31.41
30.3	-1.44	1438.6	25.47	31.64
35.0	-1.54	1438.4	25.61	31.81
40.3	-1.46	1439.0	25.74	31.98
45.3	-1.49	1439.3	25.93	32.21
50.0	-1.64	1439.3	26.27	32.62
54.5	-1.64	1439.3	26.30	32.66

Station Number 218 219 ASL Cast X APL Cast X Julian Day 256 GMT hhmm 1803 Platform Ship Latitude 71 22.3 Longitude 158 52.9

218



219



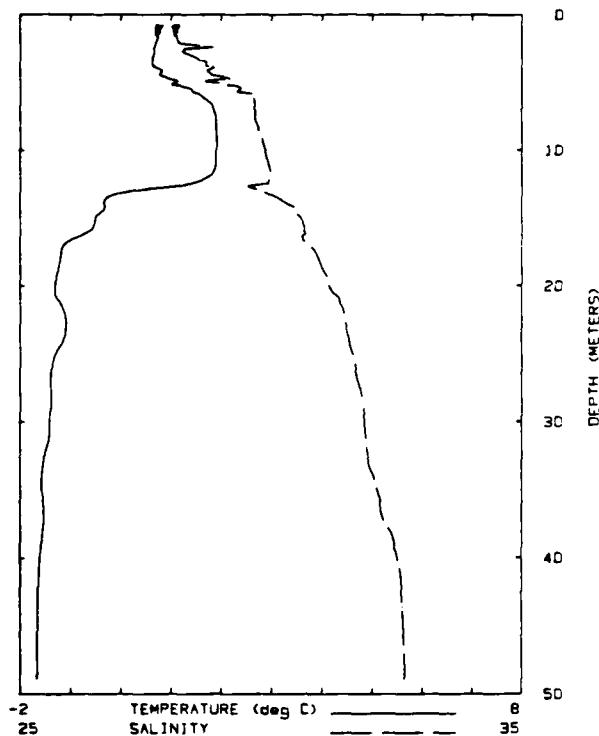
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.6	2.6	1.16	24.992	28.199	22.606	1445.4
7.8	7.8	1.17	24.896	28.195	22.603	1445.5
12.9	12.9	1.20	24.929	28.380	22.745	1446.3
18.1	18.0	-0.72	25.212	30.673	24.668	1447.2
23.1	23.0	-1.28	25.104	31.094	25.022	1439.2
28.4	28.2	-1.26	25.315	31.362	25.238	1439.7
33.6	33.4	-1.22	25.464	31.512	25.358	1439.2
38.7	38.5	-1.36	25.548	31.778	25.577	1439.0
44.1	43.8	-1.54	25.718	32.203	25.925	1438.8
49.4	49.2	-1.57	25.745	32.273	25.992	1438.8

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

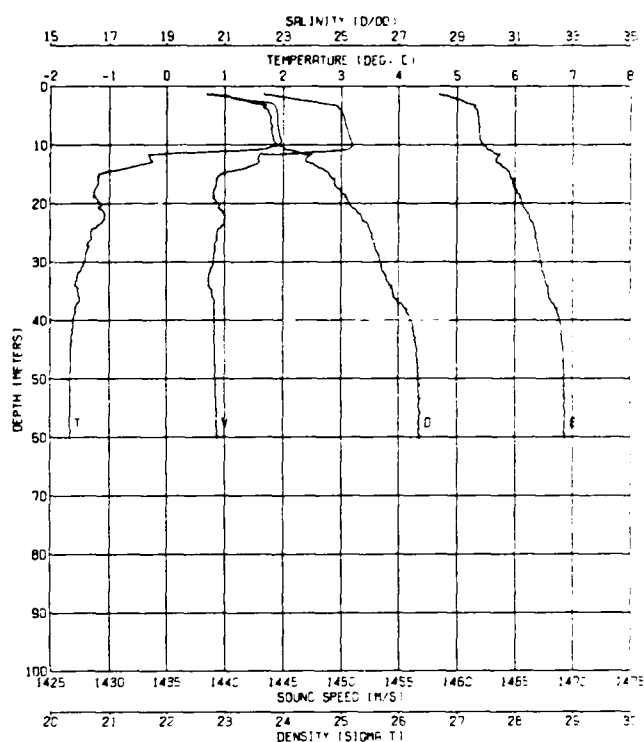
5.5	1.16	1445.4	22.61	28.20
11.0	1.23	1445.8	22.67	28.27
15.3	-1.74	1440.9	24.58	30.57
20.5	-1.23	1439.4	25.05	31.13
25.1	-1.24	1439.4	25.24	31.36
30.2	-1.17	1439.8	25.36	31.51
35.3	-1.39	1439.3	25.62	31.83
40.2	-1.47	1439.3	25.85	32.11
45.4	-1.59	1439.1	26.03	32.33
50.3	-1.61	1439.3	26.19	32.52
52.9	-1.61	1439.4	26.20	32.54

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
220	X		256	1838	Ship	71 19.5	158 50.3
221		X					

220



221

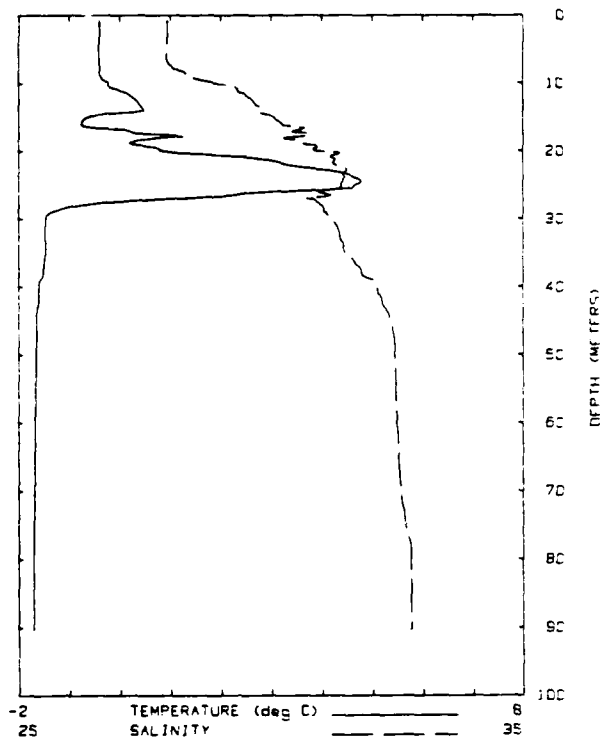


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	0.71	24.289	28.099	22.547	1443.2
3.5	3.5	0.82	24.708	28.715	23.045	1443.6
6.2	6.2	1.00	25.464	29.718	23.779	1450.8
13.0	12.8	0.80	25.454	29.679	23.819	1445.0
17.7	17.6	-1.19	25.013	30.884	24.850	1438.3
22.5	22.3	-1.10	25.500	31.449	25.305	1439.5
27.2	27.0	-1.40	25.487	31.713	25.525	1438.5
32.1	31.8	-1.47	25.535	31.883	25.665	1438.5
37.8	37.4	-1.54	25.746	32.239	25.954	1438.8
43.1	42.8	-1.85	25.919	32.595	26.245	1438.8
48.4	48.2	-1.68	25.948	32.648	26.288	1438.9
48.9	48.6	-1.67	25.948	32.652	26.291	1438.9

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	1.91	1450.3	23.80	29.73
10.1	1.86	1451.0	23.97	29.95
15.0	-1.17	1439.7	24.79	30.81
20.1	-1.09	1439.6	25.14	31.24
25.2	-1.31	1439.3	25.54	31.73
30.2	-1.42	1439.1	25.69	31.91
35.4	-1.52	1438.9	25.90	32.17
40.1	-1.61	1439.1	26.22	32.56
45.0	-1.65	1439.2	26.33	32.70
50.3	-1.66	1439.2	26.34	32.71
55.1	-1.67	1439.3	26.35	32.72
60.2	-1.67	1439.4	26.35	32.72
60.2	-1.67	1439.4	26.35	32.73

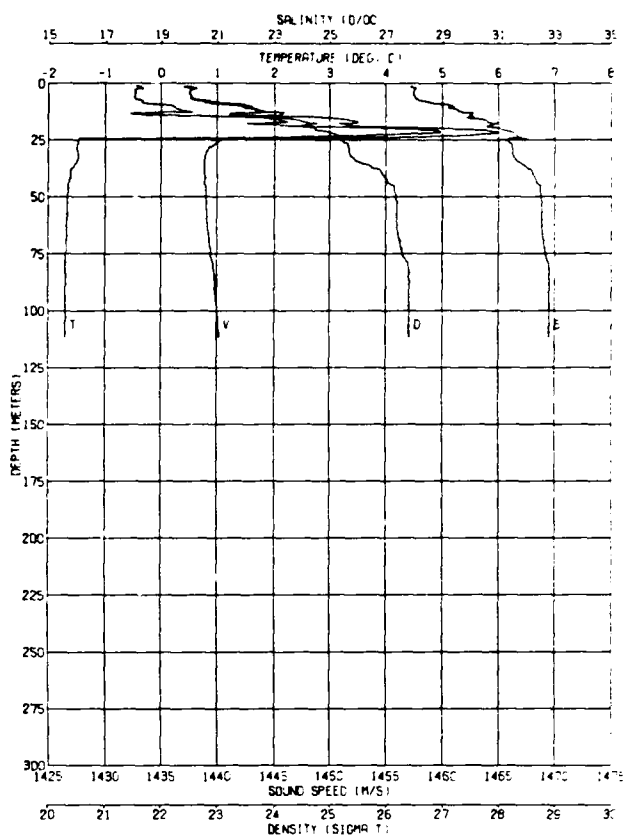
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
222	X		256	1922	Ship	71 16.5	158 45.2
223		X					

222



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.5	3.4	-0.40	23.370	27.834	22.451	1437.8
8.6	8.6	-0.39	23.677	28.318	22.760	1438.5
13.8	13.8	0.46	25.444	29.802	23.924	1444.5
18.9	18.8	0.21	25.885	30.829	24.599	1444.5
24.1	23.9	4.86	30.110	31.458	24.832	1465.1
29.0	28.8	-1.24	25.080	31.030	24.869	1438.4
34.8	34.6	-1.46	25.227	31.445	25.309	1438.0
40.7	40.5	-1.60	25.604	32.113	25.853	1438.3
46.4	46.6	-1.65	25.791	32.414	26.088	1438.6
52.2	51.8	-1.66	25.816	32.480	26.135	1438.7
58.2	57.9	-1.67	25.822	32.477	26.149	1438.8
64.1	63.7	-1.68	25.846	32.515	26.181	1438.9
69.8	69.4	-1.69	25.880	32.586	26.222	1439.0
75.8	75.1	-1.70	25.947	32.688	26.304	1439.2
80.8	80.3	-1.70	26.016	32.768	26.386	1439.4
85.8	86.0	-1.70	26.022	32.773	26.390	1439.5
90.8	90.3	-1.70	26.024	32.772	26.390	1439.5

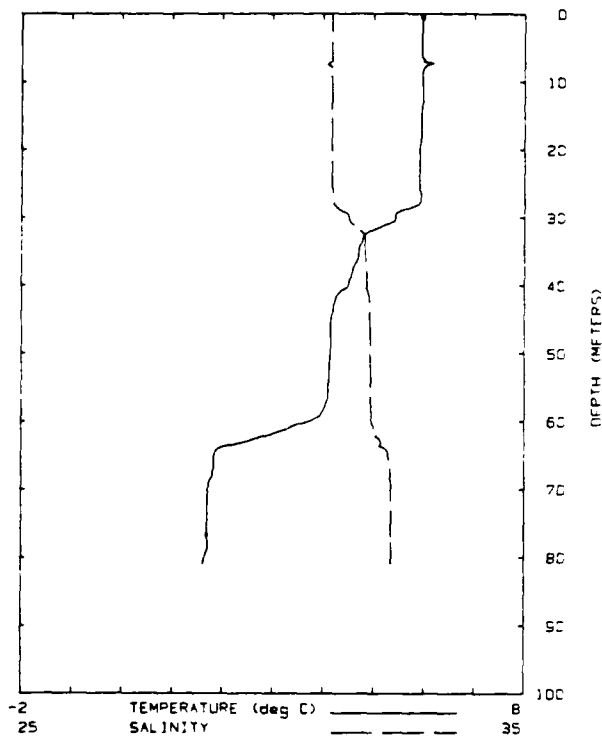
223



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (D/00)
5.9	-1.47	1437.7	22.55	28.04
10.4	-1.22	1442.4	23.63	29.42
15.0	1.80	1449.0	23.94	29.88
20.3	4.54	1461.7	24.72	31.09
25.2	-1.47	1440.3	25.19	31.32
30.5	-1.47	1439.1	25.34	31.49
35.0	-1.50	1438.9	25.56	31.75
40.2	-1.61	1438.9	25.94	32.22
45.0	-1.64	1439.0	26.14	32.47
50.2	-1.66	1439.0	26.18	32.51
55.1	-1.67	1439.0	26.19	32.53
60.3	-1.67	1439.1	26.19	32.53
65.3	-1.66	1439.2	26.21	32.55
70.7	-1.68	1439.3	26.26	32.61
75.3	-1.69	1439.5	26.32	32.69
80.5	-1.70	1439.7	26.40	32.79
85.0	-1.68	1439.8	26.40	32.79
90.3	-1.70	1439.8	26.42	32.81
95.1	-1.70	1439.9	26.41	32.80
100.5	-1.70	1440.0	26.42	32.80
110.3	-1.69	1440.2	26.41	32.80
111.8	-1.68	1440.2	26.41	32.79

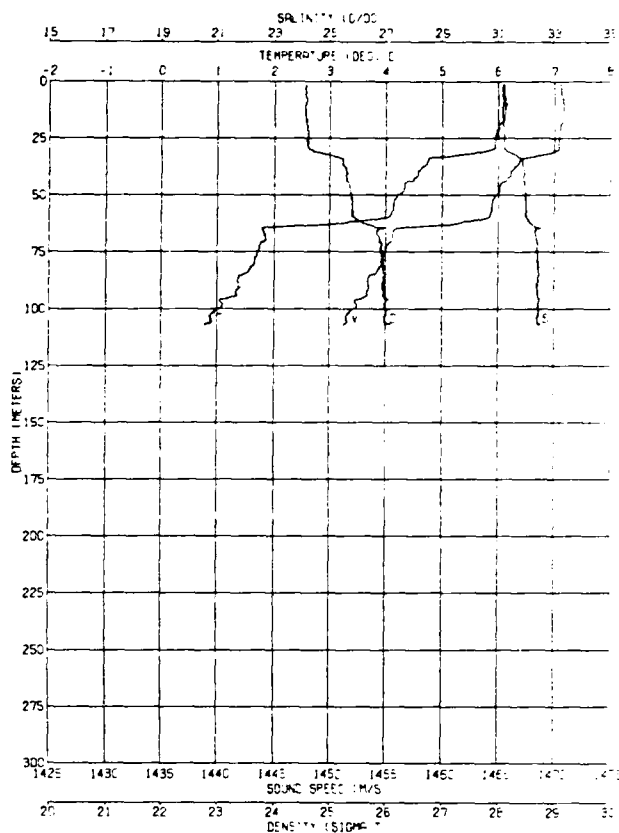
Station Number 224 225 ASL Cast X APL Cast X Julian Day 256 GMT hhmm 2017 Platform Ship Latitude 71 13.7 Longitude 158 43.8

224



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.6	2.6	5.95	30.911	31.169	24.560	1469.7
8.2	8.1	5.89	30.862	31.190	24.572	1469.9
13.1	13.1	5.87	30.831	31.170	24.558	1469.9
18.0	17.9	5.83	30.907	31.174	24.566	1469.9
23.2	23.0	5.80	30.889	31.177	24.571	1469.8
28.7	28.6	5.74	30.850	31.284	24.675	1469.4
34.4	34.2	4.74	30.508	31.834	25.220	1466.1
39.4	39.1	4.54	30.374	31.872	25.271	1465.4
44.3	44.0	4.18	30.142	31.824	25.355	1464.2
49.4	49.1	4.15	30.119	31.841	25.364	1464.0
54.3	54.0	4.11	30.091	31.845	25.372	1464.0
59.4	59.0	3.85	29.970	31.954	25.394	1463.4
64.2	63.8	2.01	28.560	32.178	25.736	1455.4
68.9	68.4	1.77	28.482	32.321	25.868	1454.6
73.7	73.2	1.70	28.450	32.356	25.900	1454.4
77.4	76.9	1.70	28.446	32.350	25.895	1454.4
76.8	76.4	1.71	28.459	32.353	25.898	1454.5
81.0	80.5	1.64	28.405	32.358	25.906	1454.2
81.2	80.7	1.64	28.404	32.353	25.902	1454.3

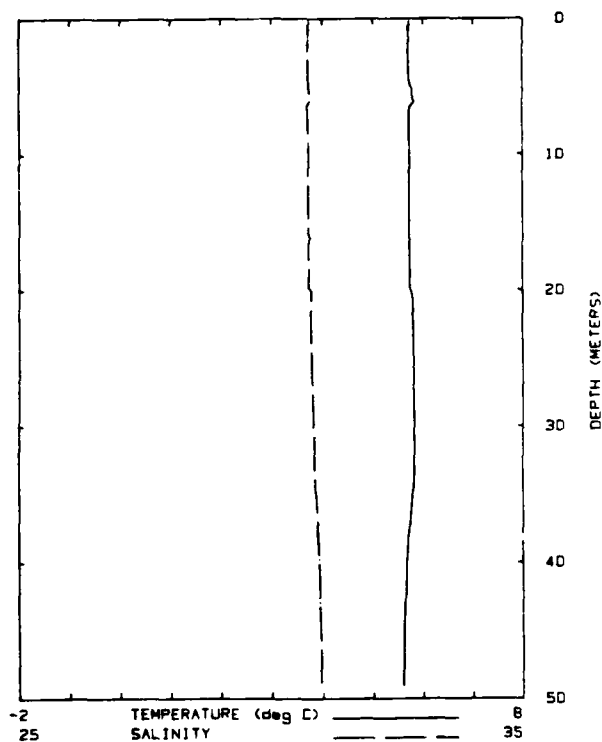
225



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	6.11	1470.7	24.58	31.18
10.3	6.14	1470.9	24.58	31.19
15.0	6.11	1470.8	24.55	31.16
20.3	6.00	1470.5	24.59	31.19
25.1	5.95	1470.4	24.61	31.20
30.2	5.85	1470.3	24.70	31.31
35.1	4.75	1466.9	25.24	31.86
40.2	4.57	1466.1	25.30	31.90
45.0	4.34	1465.2	25.34	31.93
50.2	4.20	1464.7	25.39	31.97
55.1	4.13	1464.4	25.40	31.97
60.1	3.93	1464.0	25.47	32.04
65.2	1.80	1455.8	25.86	32.33
70.4	1.86	1455.6	25.88	32.35
75.0	1.72	1455.0	25.96	32.43
80.3	1.66	1454.7	25.97	32.44
85.0	1.45	1454.0	26.01	32.47
90.2	1.37	1453.5	25.97	32.41
95.3	1.24	1453.1	26.00	32.44
100.1	1.03	1452.2	26.00	32.43
107.1	.78	1451.3	26.10	32.53

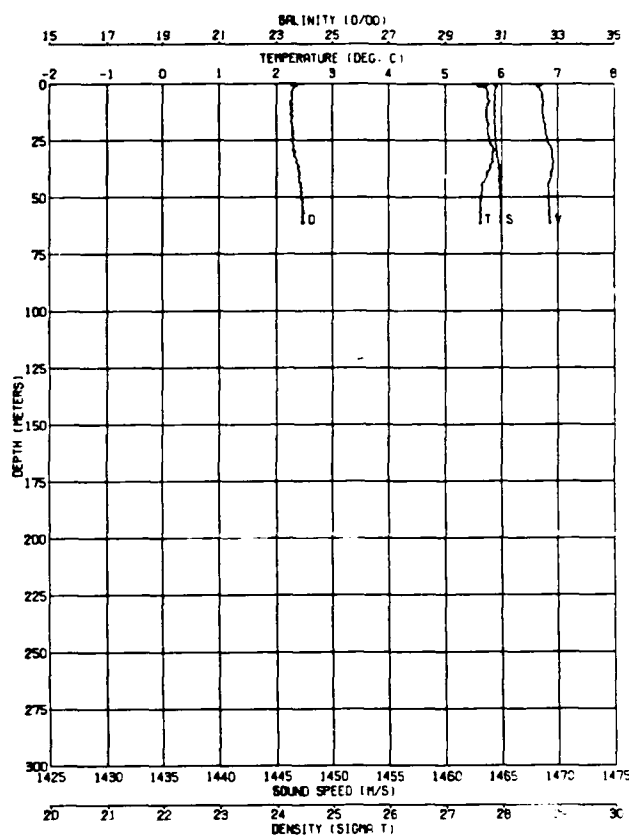
Station Number 226 ASL Cast X APL Cast X Julian Day 256 GMT hhmm 2131 Platform Ship Latitude 71 8.8 Longitude 158 38.2

226



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.0	4.0	5.73	30.348	30.738	24.246	1466.3
9.9	9.8	5.74	30.352	30.735	24.243	1468.4
15.8	15.8	5.72	30.338	30.728	24.239	1468.4
22.0	21.9	5.81	30.465	30.787	24.275	1469.0
28.0	27.8	5.82	30.486	30.812	24.293	1469.1
33.7	33.5	5.83	30.547	30.861	24.332	1469.3
39.8	39.5	5.88	30.494	30.827	24.409	1468.9
45.5	45.2	5.81	30.470	30.868	24.440	1468.7
48.2	48.0	5.80	30.468	30.972	24.445	1468.8

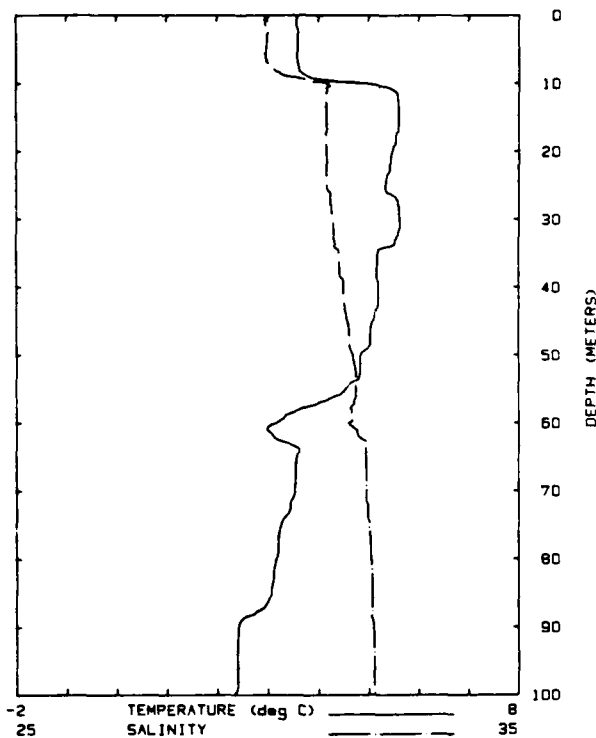
227



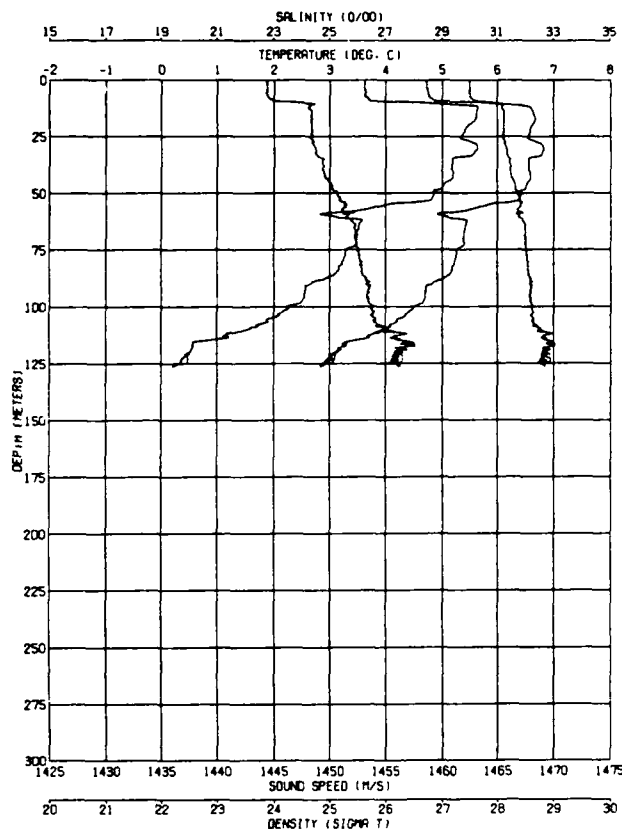
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	5.75	1468.6	24.28	30.76
10.4	5.74	1468.7	24.28	30.75
15.0	5.74	1468.7	24.28	30.76
20.1	5.75	1468.9	24.29	30.77
25.2	5.78	1469.1	24.29	30.77
30.2	5.84	1469.5	24.31	30.81
35.1	5.81	1469.6	24.37	30.89
40.2	5.73	1469.4	24.42	30.93
45.3	5.65	1469.2	24.44	30.95
50.4	5.62	1469.1	24.46	30.97
55.6	5.61	1469.2	24.47	30.98
60.2	5.61	1469.3	24.47	30.97
61.7	5.61	1469.3	24.47	30.98

Station Number 228 229 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 0135 Platform Ship Latitude 71 26.0 Longitude 156 49.0

228



229

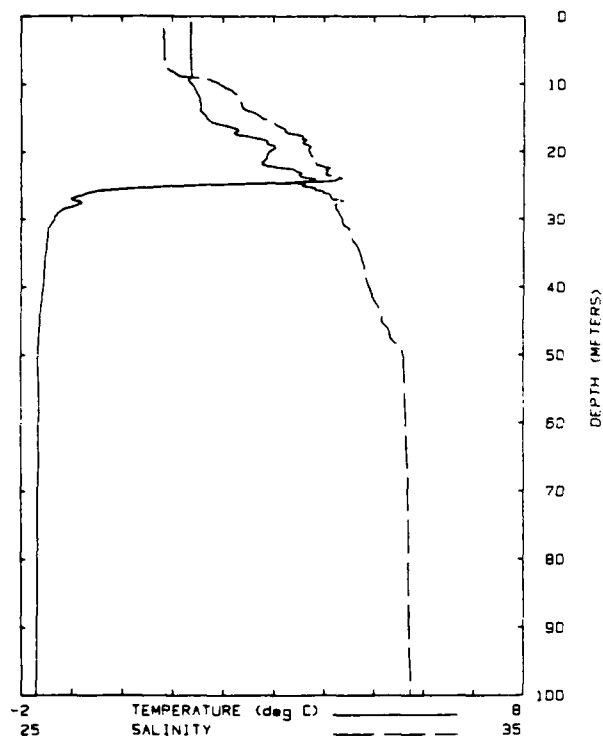


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	3.80	28.033	30.034	23.903	1458.5
7.1	7.1	3.59	28.004	30.006	23.882	1458.5
12.2	12.2	3.59	30.808	31.156	24.591	1468.4
17.2	17.1	3.59	30.818	31.184	24.597	1468.5
22.2	22.1	3.43	30.491	31.170	24.620	1467.9
27.7	27.5	3.58	30.678	31.231	24.650	1468.7
32.9	32.7	3.56	30.724	31.306	24.713	1468.8
38.4	38.2	3.18	30.487	31.423	24.851	1467.4
43.9	43.8	3.14	30.582	31.540	24.944	1467.5
49.3	49.0	4.08	30.536	31.627	25.030	1467.1
54.3	54.0	4.69	30.358	31.703	25.122	1466.0
59.2	59.9	3.35	29.228	31.882	25.218	1480.5
64.1	63.7	3.59	29.651	31.928	25.408	1481.9
68.8	68.4	3.54	29.633	31.956	25.435	1481.8
73.5	73.0	3.42	29.552	31.974	25.460	1481.4
78.1	77.7	3.21	29.432	32.039	25.531	1480.6
82.7	82.2	3.11	29.372	32.083	25.559	1480.3
87.2	86.7	2.87	29.274	32.078	25.582	1459.8
91.6	91.0	2.41	28.835	32.104	25.648	1457.5
96.0	95.4	2.39	28.825	32.105	25.650	1457.5
97.4	96.8	2.41	28.842	32.110	25.653	1457.6
100.5	99.8	2.35	28.801	32.119	25.664	1457.4

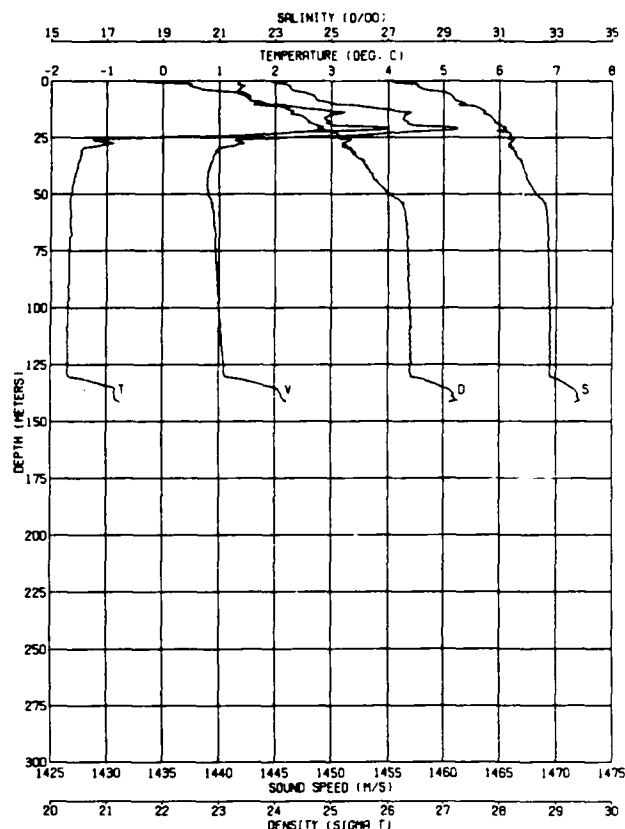
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	3.65	1458.7	23.89	30.00
10.5	4.98	1465.1	24.74	31.21
15.3	5.61	1468.2	24.68	31.23
20.3	5.46	1468.0	24.69	31.22
25.2	5.33	1467.7	24.68	31.20
30.7	5.63	1469.1	24.75	31.34
35.4	5.18	1467.7	24.87	31.43
40.2	5.19	1467.9	24.90	31.47
45.1	5.07	1467.7	25.00	31.58
50.0	4.85	1467.1	25.14	31.73
55.1	4.01	1464.2	25.30	31.85
60.2	3.07	1460.2	25.31	31.75
65.1	3.51	1462.0	25.43	31.94
70.5	3.47	1461.9	25.47	31.98
75.8	3.29	1461.3	25.51	32.01
80.3	3.22	1461.1	25.58	32.10
85.1	3.12	1460.7	25.59	32.09
90.2	2.63	1459.0	25.66	32.15
95.1	2.55	1458.4	25.66	32.13
100.4	2.24	1457.4	25.76	32.23
110.1	1.52	1454.9	26.02	32.49
120.0	.51	1450.7	26.31	32.78
125.0	.30	1449.0	26.00	32.38

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude
 230 X X 257 0238 Ship 71 31.6 156 55.1
 231

230



231



PRESSURE (dbar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

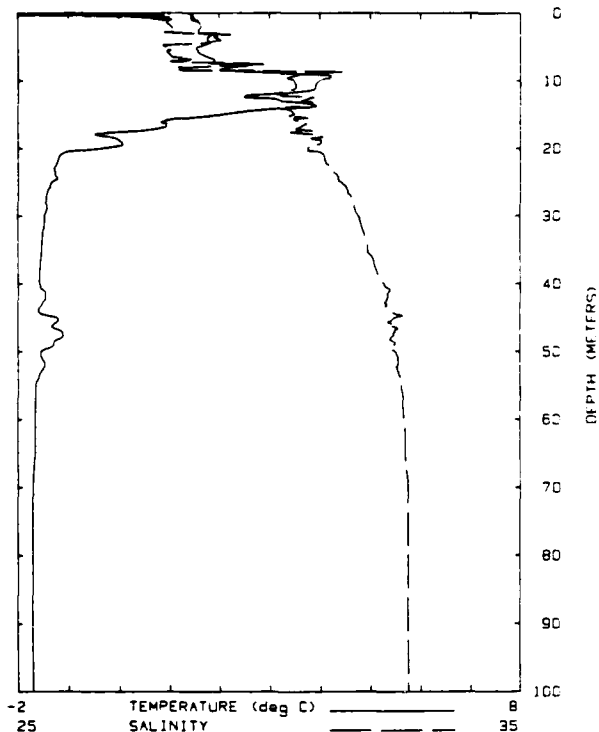
1.2	1.2	1.36	24.540	27.830	22.301	1445.8
1.4	1.4	1.36	24.535	27.824	22.297	1445.8
6.4	6.4	1.37	24.586	27.851	22.318	1445.9
11.5	11.4	1.49	25.758	28.227	23.411	1448.4
16.4	16.4	2.14	28.892	30.138	24.089	1452.5
21.5	21.4	2.80	28.030	30.772	24.555	1456.3
26.7	26.6	-0.82	25.487	31.134	25.042	1440.5
31.8	31.8	-1.48	25.262	31.521	25.371	1438.1
36.8	36.7	-1.53	25.432	31.801	25.599	1436.2
42.0	41.8	-1.59	25.541	32.006	25.786	1434.3
47.3	47.0	-1.64	25.734	32.334	26.033	1438.5
52.5	52.2	-1.85	25.940	32.824	26.268	1439.0
57.8	57.4	-1.84	25.980	32.835	26.277	1439.1
63.1	62.7	-1.85	25.972	32.881	26.298	1439.2
68.3	67.8	-1.86	25.985	32.889	26.322	1439.2
73.4	73.0	-1.88	25.984	32.887	26.328	1439.3
78.7	78.2	-1.88	25.985	32.700	26.330	1439.4
83.9	83.4	-1.88	25.988	32.701	26.331	1439.4
89.1	88.8	-1.89	25.989	32.706	26.336	1439.5
94.3	93.7	-1.70	25.995	32.721	26.348	1439.6
99.4	98.8	-1.71	26.002	32.742	26.365	1439.6
104.6	104.0	-1.71	26.011	32.750	26.372	1439.7
109.8	109.1	-1.71	26.015	32.753	26.374	1439.8
115.0	114.2	-1.71	26.017	32.752	26.373	1439.8
120.2	119.4	-1.71	26.020	32.753	26.374	1440.0
125.3	124.8	-1.71	26.023	32.754	26.375	1440.0
130.5	129.8	-1.70	26.031	32.759	26.379	1440.1
135.8	130.0	-1.70	26.034	32.759	26.378	1440.2

DEPTH T (C) V (M/S) DENSITY S (0/00)

5.5	1.46	1447.8	23.34	29.12
10.3	1.83	1450.3	23.85	29.79
15.1	2.99	1456.5	24.45	30.63
20.4	3.79	1460.2	24.87	31.23
25.6	-0.69	1444.3	25.15	31.30
30.1	-1.44	1439.8	25.29	31.43
35.1	-1.49	1439.3	25.54	31.73
40.1	-1.55	1439.0	25.67	31.89
45.1	-1.59	1438.9	25.82	32.07
50.2	-1.63	1439.0	26.02	32.32
55.3	-1.64	1439.4	26.27	32.62
60.1	-1.64	1439.5	26.32	32.68
65.2	-1.65	1439.6	26.33	32.70
70.0	-1.65	1439.6	26.36	32.73
75.1	-1.67	1439.6	26.36	32.74
80.3	-1.67	1439.7	26.36	32.74
85.5	-1.67	1439.8	26.36	32.74
90.2	-1.69	1439.8	26.37	32.75
95.3	-1.68	1439.9	26.37	32.75
100.4	-1.70	1440.0	26.40	32.78
110.5	-1.70	1440.1	26.40	32.79
120.0	-1.70	1440.3	26.42	32.81
130.0	-1.68	1440.5	26.41	32.80
140.8	-1.84	1445.8	27.22	33.83
141.2	-1.78	1445.9	27.05	33.62

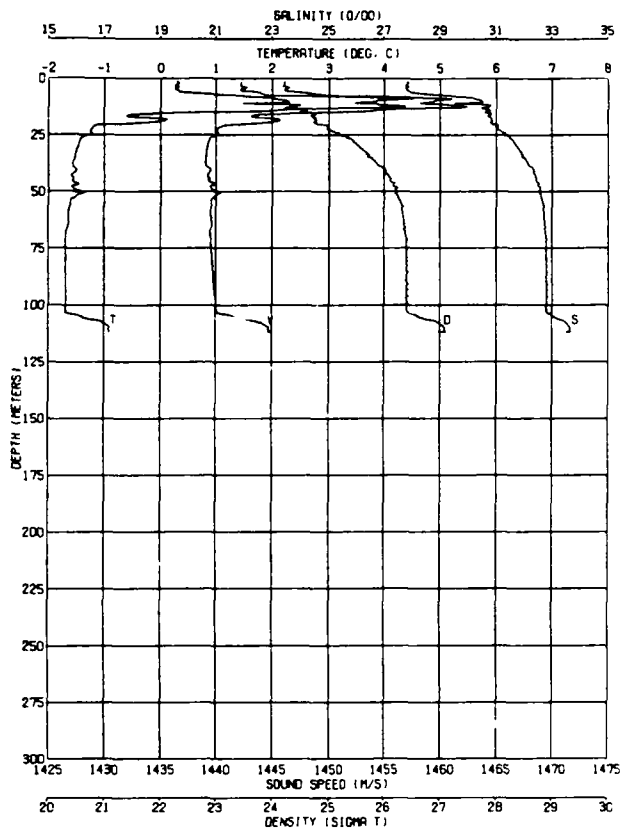
Station Number 232 233 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 0339 Platform Ship Latitude 71 34.3 Longitude 156 57.7

232



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.8	3.6	1.77	25.690	28.888	23.124	1449.0
9.1	9.1	3.80	28.747	30.686	24.403	1460.3
14.2	14.1	3.27	28.019	30.316	24.155	1457.6
19.5	19.4	0.07	26.073	30.989	24.802	1444.4
24.8	24.7	-1.23	25.338	31.358	25.234	1438.8
30.3	30.1	-1.47	25.453	31.774	25.576	1438.3
35.7	35.5	-1.54	25.539	31.955	25.724	1438.3
41.3	41.1	-1.48	25.801	32.382	26.076	1439.3
46.4	46.1	-1.28	26.020	32.346	26.035	1440.2
51.4	51.1	-1.51	25.889	32.553	26.208	1439.5
56.5	56.2	-1.65	25.857	32.844	26.285	1439.1
61.6	61.2	-1.68	25.884	32.887	26.328	1439.2
66.7	66.3	-1.68	25.887	32.705	26.334	1439.2
71.8	71.4	-1.71	25.889	32.753	26.374	1439.2
76.8	76.4	-1.71	26.001	32.753	26.374	1439.3
81.8	81.3	-1.71	26.004	32.754	26.375	1439.3
86.8	86.3	-1.71	26.006	32.754	26.375	1439.4
91.8	91.4	-1.71	26.009	32.755	26.375	1439.5
96.8	96.3	-1.71	26.012	32.755	26.375	1439.6
101.9	101.2	-1.70	26.026	32.766	26.384	1439.7
102.8	102.2	-1.69	26.034	32.768	26.386	1439.8

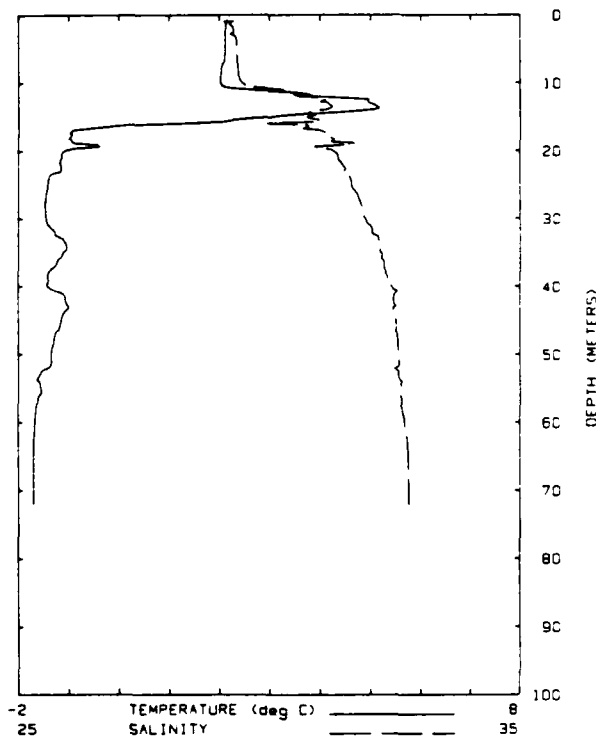
233



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	1.46	1446.1	22.28	27.80
10.1	3.81	1459.5	24.26	30.48
15.0	.43	1448.8	24.75	30.86
20.1	-.80	1442.2	24.94	31.02
25.4	-1.35	1439.4	25.35	31.50
30.6	-1.49	1438.9	25.64	31.85
35.0	-1.54	1438.9	25.81	32.07
40.1	-1.50	1439.4	26.06	32.37
45.1	-1.58	1439.2	26.13	32.46
50.0	-1.35	1440.3	26.21	32.56
55.1	-1.62	1439.5	26.31	32.67
60.5	-1.64	1439.5	26.35	32.72
65.3	-1.65	1439.6	26.37	32.75
70.3	-1.70	1439.5	26.40	32.78
75.1	-1.70	1439.6	26.41	32.79
80.3	-1.70	1439.6	26.41	32.79
85.1	-1.70	1439.7	26.41	32.79
90.2	-1.70	1439.8	26.41	32.80
95.3	-1.70	1439.9	26.40	32.79
100.2	-1.69	1440.0	26.41	32.79
110.2	-.92	1444.8	27.08	33.65
112.0	-.90	1444.7	26.96	33.50

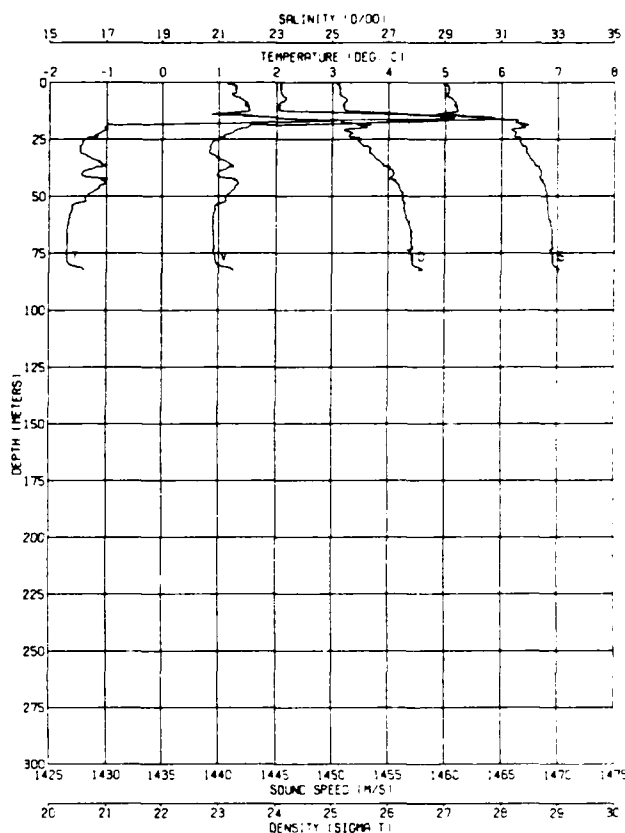
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
234	X		257	0426	Ship	71 37.1	157 1.7
235		X					

234



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	2.13	26.272	29.269	23.406	1451.1
8.6	8.6	2.10	26.326	29.381	23.481	1451.2
11.5	11.5	3.44	26.357	30.559	24.334	1456.6
18.8	18.5	-0.20	25.894	30.780	24.738	1442.8
22.4	22.3	-1.15	25.472	31.403	25.317	1439.3
28.1	28.0	-1.47	25.488	31.618	25.610	1438.4
33.8	33.7	-1.06	26.008	32.202	25.911	1440.9
38.8	38.6	-1.40	25.834	32.351	26.042	1439.6
44.0	44.7	-1.13	26.286	32.509	26.182	1441.2
50.4	50.1	-1.35	26.143	32.567	26.215	1440.3
56.0	55.7	-1.54	26.025	32.612	26.256	1439.6
61.1	60.8	-1.67	25.978	32.693	26.325	1439.1
66.3	65.9	-1.70	26.006	32.757	26.377	1439.1
71.2	70.8	-1.70	26.008	32.761	26.380	1439.2
72.4	72.0	-1.70	26.010	32.761	26.380	1439.2

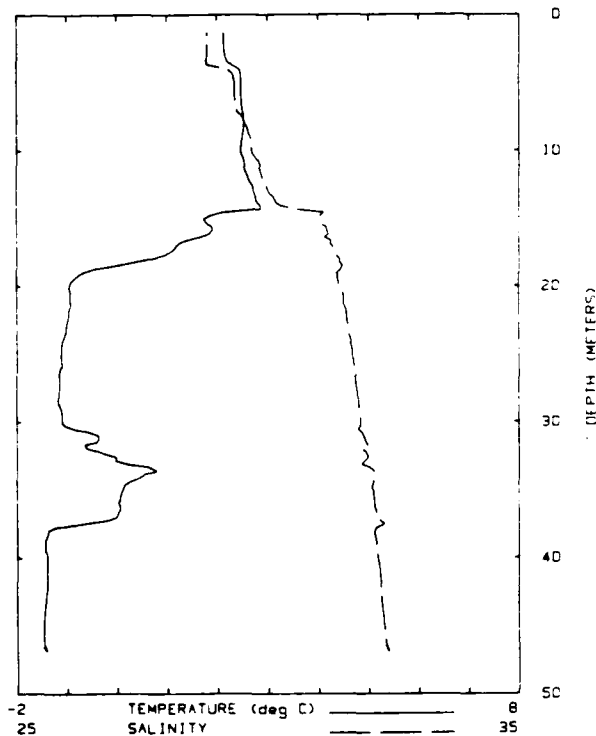
235



DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.5	2.10	1450.7	23.25	29.06
10.3	2.04	1451.1	23.51	29.39
15.4	5.17	1464.1	23.97	30.25
20.1	-1.08	1442.1	25.43	31.61
25.4	-1.38	1440.0	25.40	31.56
30.1	-1.44	1439.5	25.57	31.78
35.1	-1.13	1441.0	25.81	32.07
40.1	-1.43	1440.1	26.05	32.37
45.4	-1.11	1441.6	26.15	32.49
50.2	-1.35	1440.7	26.23	32.59
55.3	-1.59	1439.7	26.27	32.63
60.3	-1.66	1439.5	26.31	32.68
65.1	-1.69	1439.6	26.41	32.80
70.2	-1.69	1439.6	26.39	32.77
75.1	-1.70	1439.6	26.40	32.78
80.6	-1.61	1440.2	26.50	32.92
82.6	-1.38	1441.2	26.51	32.93

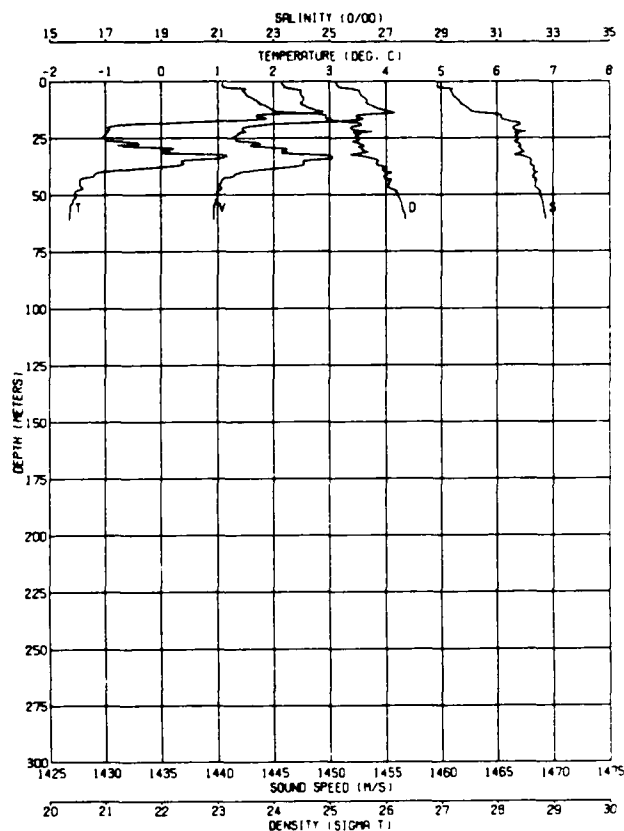
Station Number 236 237 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 0504 Platform Ship Latitude 71 39.9 Longitude 157 4.6

236



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.8	0.8	2.14	25.930	28.851	23.072	1450.6
2.8	2.8	2.15	25.939	28.851	23.072	1450.6
7.7	7.7	2.51	26.785	28.549	23.804	1453.2
12.7	12.6	2.71	27.384	30.057	23.993	1454.9
17.4	17.3	1.09	27.034	31.213	25.023	1449.3
22.2	22.1	-0.96	25.691	31.554	25.385	1440.3
26.9	26.7	-1.15	25.689	31.710	25.524	1439.8
31.7	31.5	-1.19	25.781	31.881	25.864	1439.8
36.2	36.0	-0.84	26.330	32.068	25.790	1442.8
40.8	40.8	-1.40	25.824	32.199	25.918	1439.4
45.4	45.2	-1.45	25.852	32.290	25.994	1439.3
47.0	46.7	-1.44	25.930	32.377	26.064	1439.6

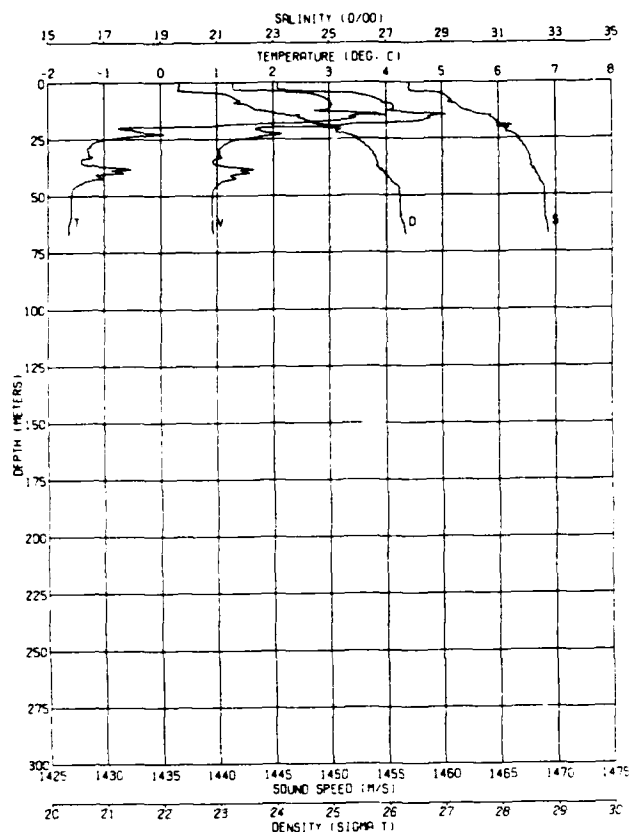
237



DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.4	2.49	1452.8	23.49
10.1	2.51	1453.5	23.76
15.1	1.68	1452.5	24.92
20.1	-0.93	1442.2	25.44
25.1	-0.99	1441.4	25.61
30.3	-0.04	1445.5	25.72
35.3	0.37	1447.7	25.85
40.3	-1.16	1441.9	26.15
45.0	-1.46	1440.1	26.09
50.0	-1.54	1439.8	26.24
55.2	-1.62	1439.6	26.32
60.2	-1.65	1439.5	26.36
60.8	-1.65	1439.5	26.36

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
238		X	257	0549	Ship	71 41.6	157 9.2
239	X						

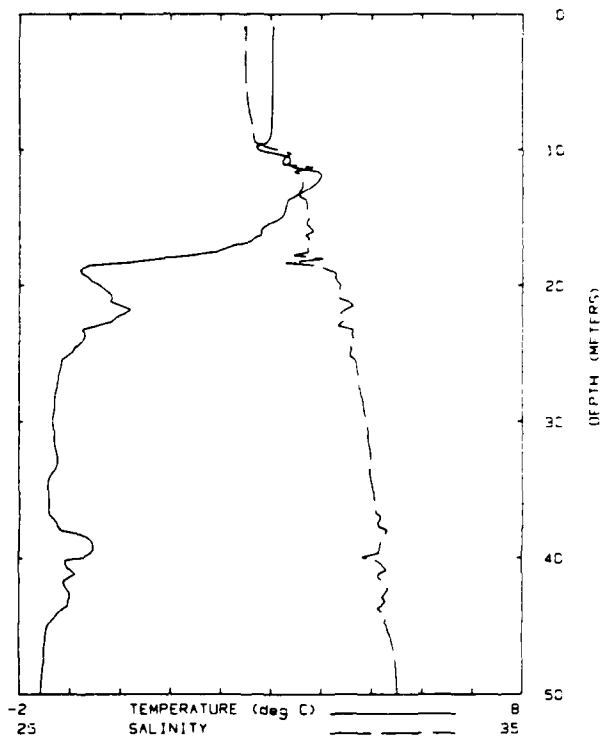
238



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
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5.8	2.81	1452.9	23.25	29.10
10.4	3.04	1455.6	23.57	29.55
15.4	3.34	1458.8	24.44	30.67
20.3	-1.75	1443.5	25.12	31.25
25.1	-1.03	1441.9	25.49	31.68
30.3	-1.28	1440.2	25.73	31.97
35.3	-1.41	1439.6	25.83	32.08
40.2	-1.94	1442.3	25.98	32.29
45.3	-1.49	1440.0	26.17	32.51
50.2	-1.58	1439.6	26.23	32.58
55.2	-1.59	1439.6	26.25	32.60
60.2	-1.60	1439.6	26.27	32.62
65.1	-1.63	1439.6	26.34	32.71
67.2	-1.63	1439.7	26.35	32.72

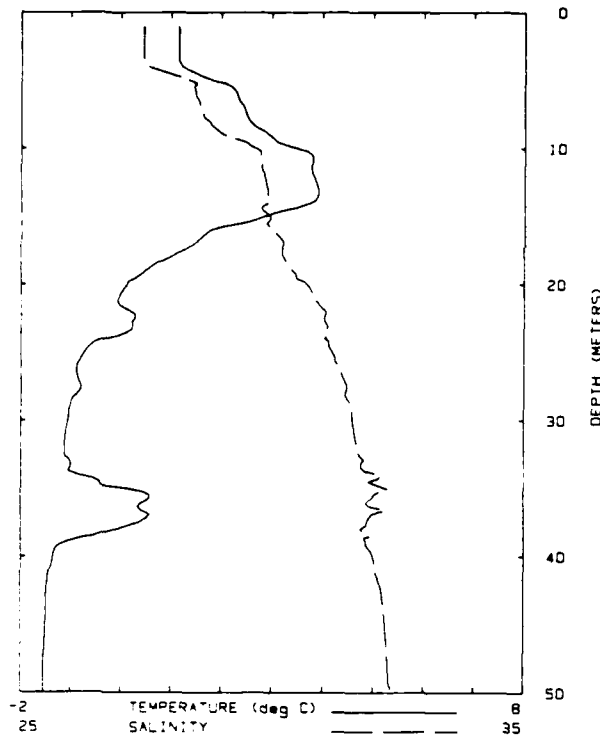
239



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
5.8	5.8	3.03	27.174	28.531	23.551	1455.5
11.2	11.1	3.35	28.031	30.256	24.101	1457.8
16.8	16.8	2.59	27.819	30.719	24.530	1455.3
22.5	22.4	-0.08	28.317	31.480	25.285	1444.3
28.5	28.4	-1.30	25.625	31.821	25.810	1436.2
34.3	34.1	-1.40	25.688	31.885	25.745	1439.0
40.2	40.0	-0.70	28.106	31.832	25.602	1442.2
45.7	45.5	-1.67	25.883	32.347	26.040	1439.4
51.5	51.2	-1.58	25.817	32.522	26.184	1439.1
51.8	51.8	-1.58	25.817	32.523	26.185	1439.1

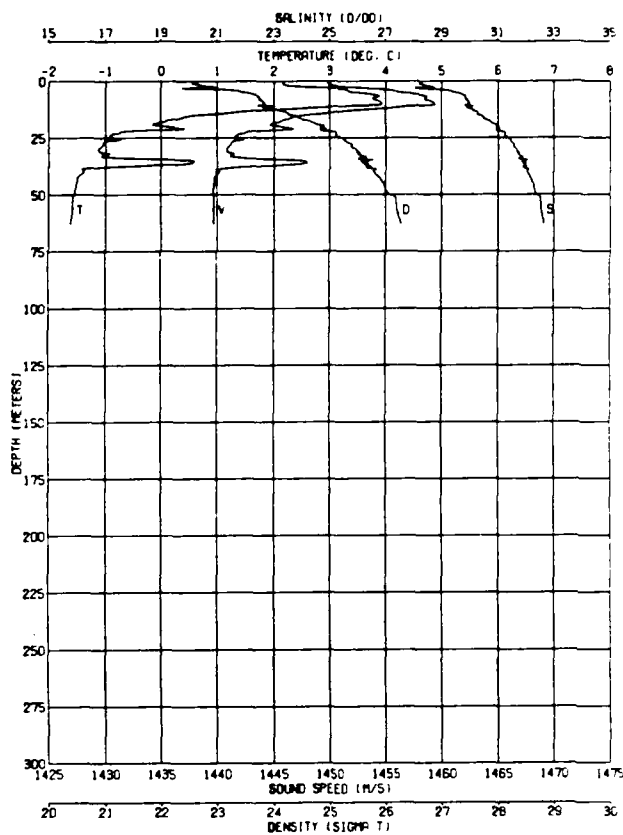
Station Number 240 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 0620 Platform Ship Latitude 71 45.4 Longitude 157 10.9

240



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.8	4.7	1.81	24.861	28.133	22.531	1447.3
8.9	8.9	3.33	27.437	29.569	23.557	1456.9
15.1	15.1	2.84	27.390	29.869	23.814	1455.3
20.5	20.4	0.06	25.880	30.761	24.711	1444.0
25.3	25.2	-0.75	25.589	31.215	25.106	1440.9
30.7	30.5	-1.08	25.838	31.611	25.435	1440.0
36.0	35.6	-0.57	27.232	31.888	25.673	1448.2
41.2	41.0	-1.42	25.893	32.042	25.782	1439.1
46.8	46.3	-1.52	25.784	32.271	25.879	1439.0
50.6	50.3	-1.56	25.884	32.458	26.132	1439.2
50.7	50.4	-1.57	25.900	32.476	26.146	1439.1
50.8	50.5	-1.56	25.898	32.468	26.140	1439.2

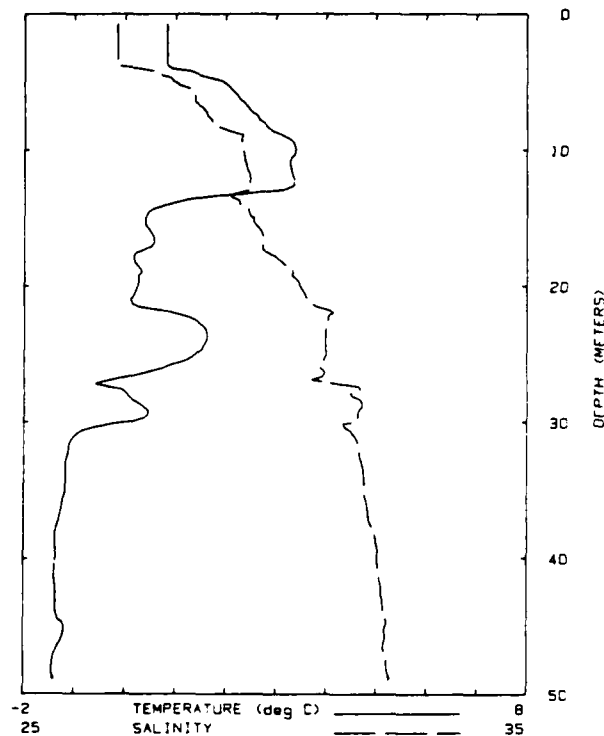
241



DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	3.61	1457.2	23.58	29.60
10.1	3.94	1459.4	23.85	29.98
15.3	.56	1447.5	24.38	30.40
20.1	-.19	1445.8	24.88	30.98
25.2	-.83	1442.0	25.25	31.40
30.6	-1.12	1440.9	25.49	31.69
35.0	-.64	1447.7	25.57	31.86
40.1	-1.38	1440.2	25.81	32.07
45.6	-1.51	1439.8	25.99	32.29
50.2	-1.53	1439.8	26.10	32.42
55.7	-1.58	1439.7	26.19	32.53
60.3	-1.59	1439.7	26.24	32.59
62.9	-1.61	1439.7	26.31	32.68

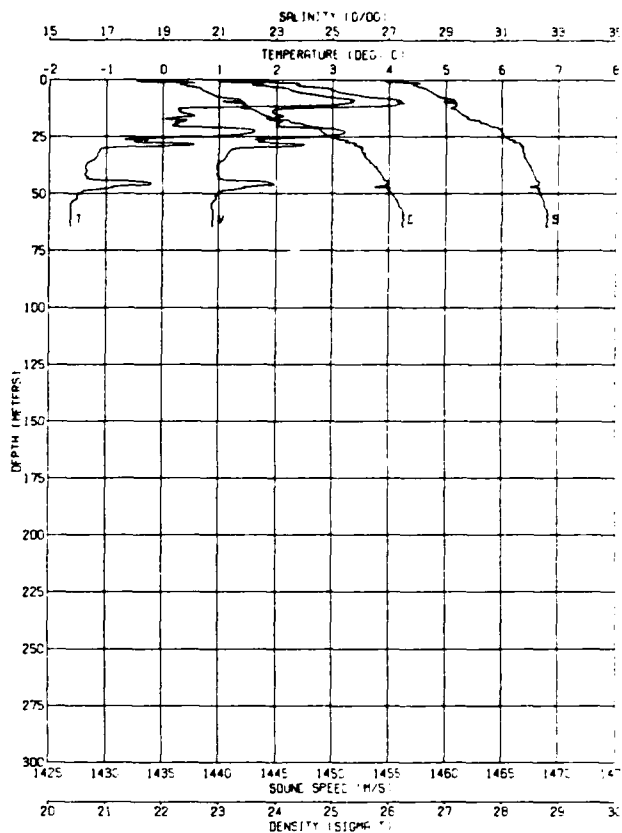
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
242	X		257	0659	Ship	71 48.2	157 14.8
243		X					

242



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.5	4.5	1.46	24.534	27.717	22.205	1446.2
9.9	9.9	3.38	27.275	28.332	23.365	1456.8
14.9	14.9	0.41	25.158	28.480	23.867	1443.9
20.1	20.0	0.25	25.816	30.484	24.480	1444.5
25.3	25.2	1.36	27.073	30.894	24.832	1450.3
30.3	30.2	-0.26	26.078	31.344	25.183	1443.5
35.5	35.3	-1.18	25.678	31.773	25.568	1439.8
40.4	40.2	-1.37	25.729	32.032	25.782	1439.3
45.5	45.2	-1.20	25.870	32.172	25.892	1440.4
49.1	48.8	-1.40	25.875	32.256	25.965	1439.6
49.0	48.7	-1.43	25.859	32.266	25.973	1439.5

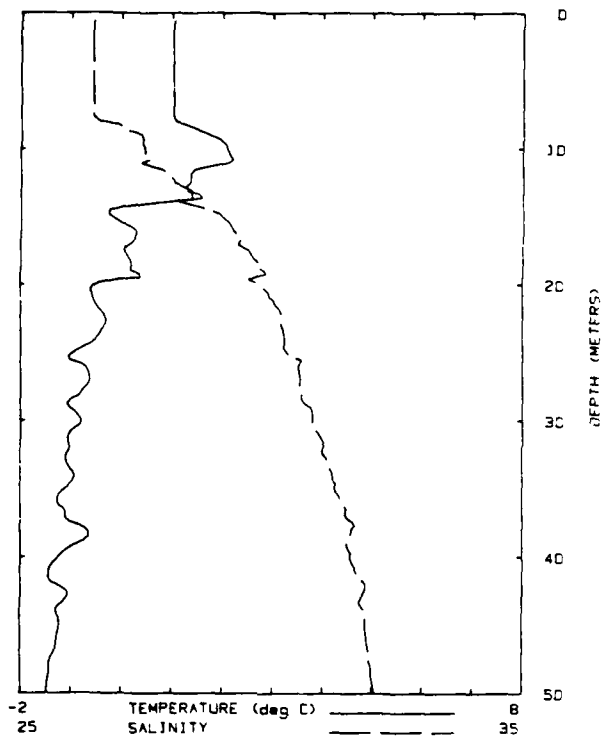
243



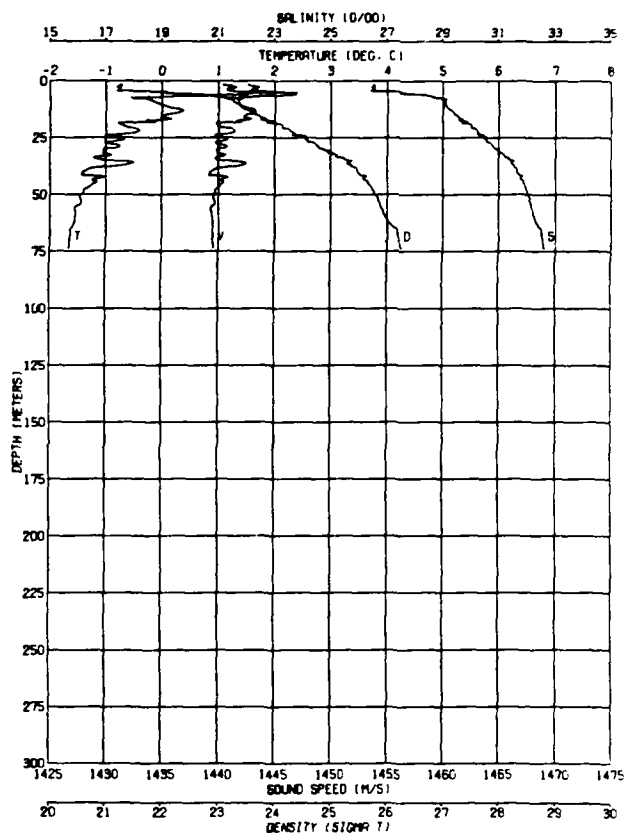
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	2.34	1450.4	22.80	28.51
10.1	3.33	1456.4	23.47	29.44
15.3	4.40	1445.0	23.75	29.59
20.1	4.19	1445.3	24.48	30.49
25.4	4.58	1447.9	24.82	30.94
30.2	4.15	1441.7	25.51	31.71
35.3	4.20	1440.7	25.58	31.79
40.3	4.34	1440.2	25.76	32.01
45.1	4.25	1444.5	26.00	32.34
50.3	4.48	1440.0	26.02	32.32
55.1	4.64	1439.4	26.14	32.47
60.1	4.64	1439.5	26.23	32.57
64.0	4.64	1439.5	26.26	32.61

Station Number 244
ASL Cast X
APL Cast X
Julian Day 257
GMT hhmm 0756
Platform Ship
Latitude 71 55.0
Longitude 157 21.5

244



245

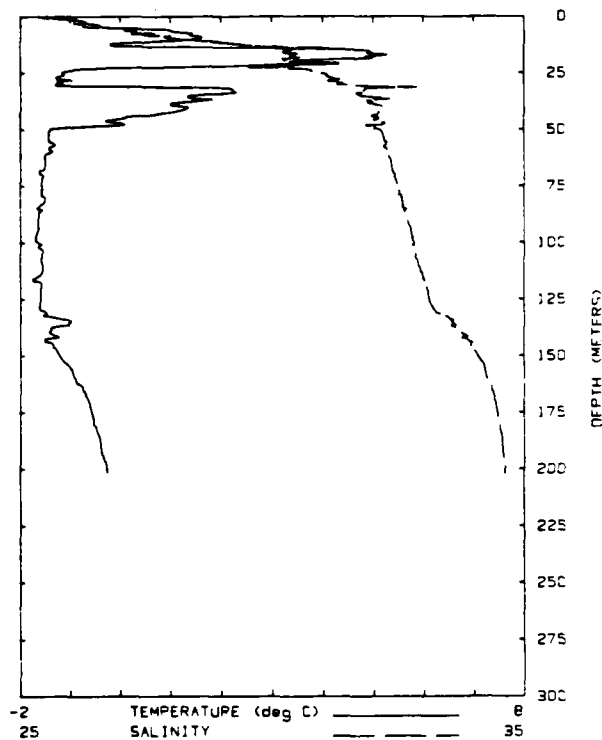


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
8.8	8.8	1.04	23.211	26.449	21.211	1442.6
12.6	12.5	1.37	24.742	28.070	22.493	1446.3
18.2	18.1	0.17	25.092	29.828	23.796	1443.0
23.7	23.6	-0.40	25.133	30.243	24.311	1441.2
29.5	29.4	-0.81	25.180	30.816	24.788	1439.7
35.1	34.9	-1.04	25.424	31.276	25.163	1439.8
40.5	40.2	-1.28	25.461	31.576	25.412	1439.1
45.8	45.6	-1.25	25.723	31.889	25.664	1439.8
51.2	50.9	-1.45	25.707	32.086	25.828	1439.2
55.2	54.9	-1.51	25.716	32.181	25.890	1439.1
55.2	54.9	-1.51	25.715	32.159	25.889	1439.0

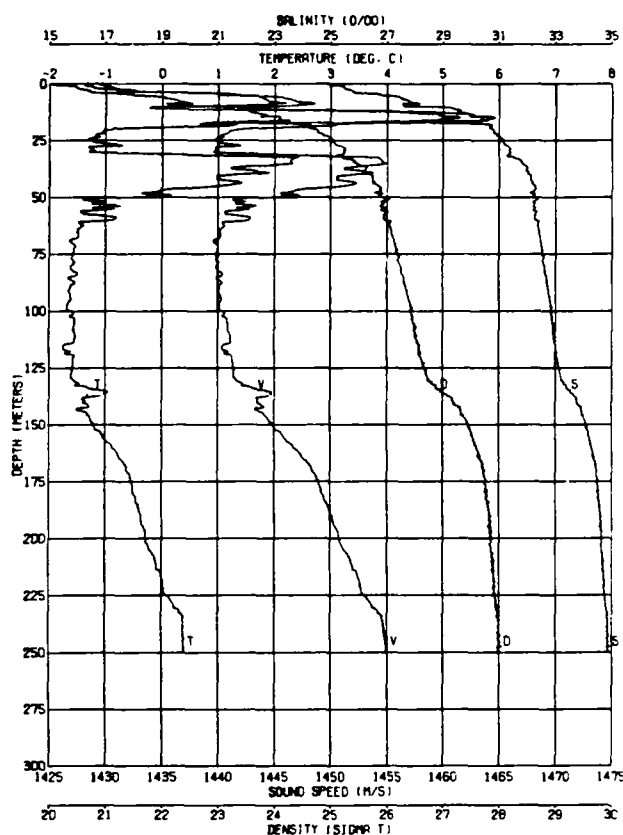
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	2.01	1447.1	21.99	27.46
10.4	.01	1441.9	23.37	29.09
15.7	.01	1442.3	23.75	29.56
20.6	-.61	1440.3	24.14	30.02
25.4	-.66	1440.7	24.58	30.56
30.3	-1.04	1439.8	24.90	30.94
35.3	-.67	1441.6	25.39	31.57
40.2	-1.41	1439.2	25.48	31.66
45.1	-1.23	1440.3	25.67	31.89
50.2	-1.45	1439.5	25.79	32.04
55.2	-1.53	1439.4	25.89	32.16
60.4	-1.55	1439.4	25.99	32.28
65.4	-1.65	1439.4	26.17	32.51
70.0	-1.65	1439.5	26.21	32.55
73.6	-1.65	1439.6	26.27	32.62

Station Number 246 247 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 1536 Platform Ship Latitude 72 5.0 Longitude 155 32.4

246



247



PRESSURE (dBar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (MS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

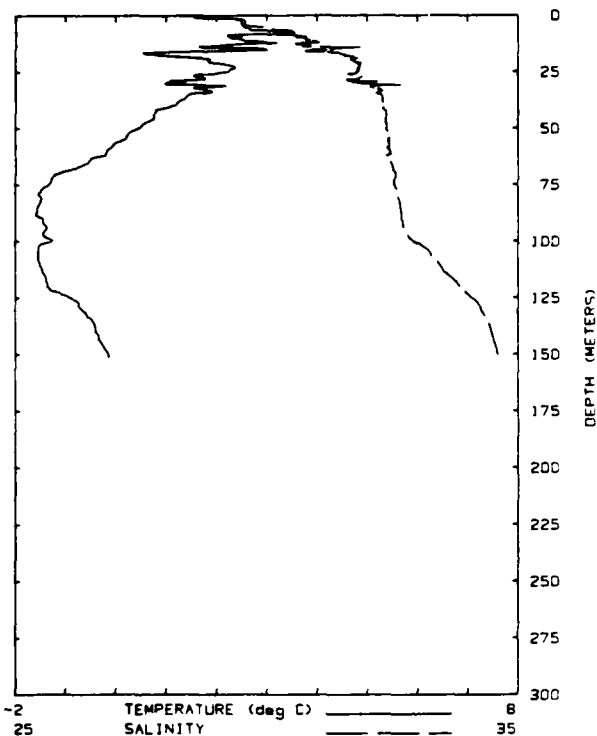
0.6	0.6	-1.10	21.201	25.703	20.665	1431.4
0.4	0.4	0.99	23.690	27.090	21.727	1443.2
12.2	12.1	-0.03	24.577	28.158	22.426	1441.3
17.9	17.8	5.05	28.479	30.374	24.033	1455.3
23.5	23.4	-0.81	25.093	30.594	24.606	1439.8
28.2	28.1	-1.25	25.278	31.283	25.182	1438.7
34.8	34.6	1.77	27.991	31.727	25.393	1453.3
40.6	40.3	1.35	28.003	32.170	25.775	1452.1
46.2	45.9	-0.10	26.716	32.007	25.720	1445.3
52.0	51.7	-1.43	25.798	32.187	25.910	1439.4
57.8	57.6	-1.34	25.890	32.206	25.923	1440.0
63.9	63.5	-1.50	25.871	32.352	26.044	1439.5
70.9	70.5	-1.55	25.895	32.432	26.111	1439.5
77.8	77.5	-1.58	25.842	32.528	26.189	1439.6
84.8	84.3	-1.62	25.853	32.544	26.235	1439.6
91.8	91.2	-1.64	26.020	32.696	26.328	1439.7
97.9	97.3	-1.69	26.035	32.771	26.388	1439.7
104.8	104.1	-1.54	26.205	32.837	26.438	1440.6
111.7	110.8	-1.54	26.276	32.827	26.511	1440.9
118.6	117.8	-1.58	26.332	33.045	26.608	1440.9
125.2	124.3	-1.59	26.371	33.107	26.658	1441.1
131.4	130.5	-1.51	26.536	33.243	26.767	1441.7
137.7	136.8	-1.05	27.140	33.549	27.000	1444.4
144.1	143.1	-1.50	27.028	33.898	27.287	1442.9
150.8	149.7	-1.22	27.392	34.076	27.432	1444.6
157.1	156.0	-0.87	27.718	34.233	27.550	1446.1
163.0	161.8	-0.87	27.843	34.287	27.581	1446.7
168.8	167.7	-0.67	28.088	34.405	27.678	1447.9
174.8	173.6	-0.58	28.223	34.464	27.722	1448.5
180.8	179.4	-0.52	28.286	34.486	27.745	1448.9
186.5	185.1	-0.42	28.438	34.562	27.784	1449.5
192.3	191.0	-0.38	28.487	34.577	27.804	1449.8
197.6	196.0	-0.31	28.581	34.602	27.821	1450.2
201.3	199.7	-0.26	28.630	34.626	27.838	1450.6
203.3	201.7	-0.25	28.633	34.621	27.834	1450.7
203.2	201.7	-0.25	28.635	34.623	27.835	1450.7

DEPTH T (C) V (M/S) DENSITY S (0/00)

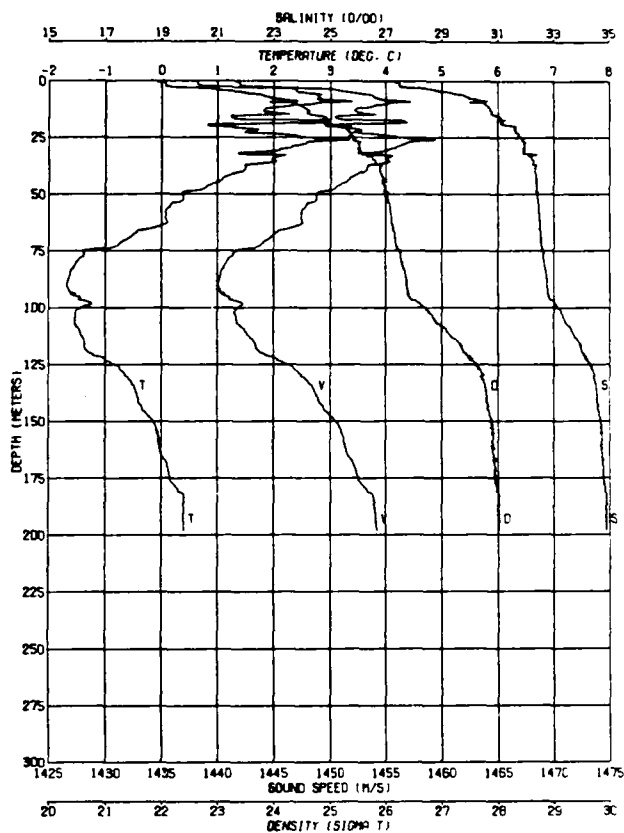
5.1	1.16	1442.1	21.53	26.83
10.1	.18	1444.2	23.21	28.92
15.1	5.31	1446.7	24.08	30.39
20.1	-0.86	1441.9	24.77	30.81
25.2	-1.23	1439.9	25.06	31.14
30.1	-1.28	1439.6	25.26	31.39
35.0	2.31	1454.7	25.43	31.79
40.1	1.22	1451.6	25.73	32.10
45.3	.84	1450.5	25.89	32.27
50.2	-0.81	1444.1	25.94	32.26
55.2	-0.82	1442.8	25.94	32.25
60.1	-0.90	1442.6	25.98	32.29
65.2	-1.51	1440.1	26.09	32.41
70.0	-1.59	1439.7	26.13	32.45
75.1	-1.58	1439.9	26.18	32.52
80.2	-1.62	1439.9	26.25	32.61
85.0	-1.64	1440.0	26.30	32.67
90.3	-1.63	1440.1	26.35	32.72
95.3	-1.63	1440.3	26.40	32.79
100.1	-1.61	1440.3	26.42	32.81
110.1	-1.53	1441.1	26.50	32.92
120.3	-1.57	1441.3	26.62	33.06
130.1	-1.57	1441.6	26.76	33.23
140.2	-1.39	1443.5	27.19	33.77
150.2	-1.19	1445.0	27.47	34.13
160.5	-0.87	1446.8	27.61	34.30
170.4	-0.61	1448.4	27.72	34.46
180.0	-0.37	1449.3	27.79	34.55
190.3	-0.37	1450.2	27.86	34.65
200.1	-0.28	1450.7	27.85	34.64
210.4	-0.10	1451.8	27.87	34.68
220.6	-0.01	1452.6	27.92	34.74
230.4	.21	1453.7	27.96	34.81
240.1	.37	1454.7	28.00	34.87
249.6	.38	1454.9	27.99	34.86

Station Number 248 249 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 1704 Platform Ship Latitude 71 59.7 Longitude 155 25.3

248



249

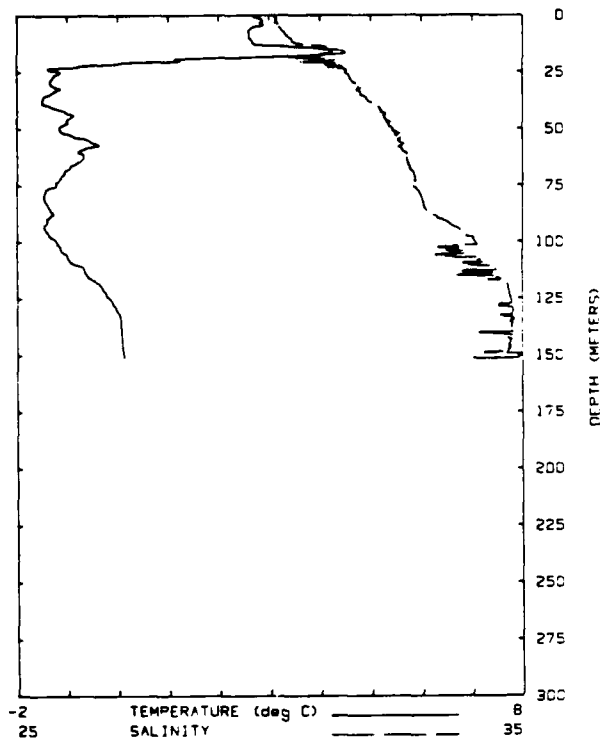


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.1	0.1	1.83	25.342	28.402	22.733	1446.6
2.6	2.6	2.57	26.785	29.486	23.558	1453.3
7.6	7.5	3.47	28.330	30.503	24.287	1458.6
12.5	12.5	3.11	28.189	30.647	24.432	1457.4
17.5	17.4	0.81	27.033	31.488	25.267	1448.4
22.5	22.4	2.28	28.539	31.803	25.487	1455.5
27.5	27.3	1.88	28.048	31.816	25.551	1452.9
32.8	32.4	1.55	28.187	32.173	25.784	1452.8
37.5	37.3	1.35	28.106	32.300	25.879	1452.2
42.6	42.4	0.79	27.708	32.373	25.970	1449.8
47.6	47.4	0.63	27.581	32.384	25.888	1449.2
52.5	52.5	0.26	27.331	32.438	26.051	1447.7
57.8	57.5	-0.05	27.085	32.445	26.070	1446.4
62.8	62.6	-0.30	26.843	32.373	26.023	1445.2
68.1	67.7	-0.79	26.581	32.519	26.159	1443.2
73.5	73.1	-1.28	26.189	32.541	26.192	1441.0
78.9	78.4	-1.50	26.056	32.594	26.241	1440.1
84.4	83.9	-1.52	26.082	32.658	26.293	1440.1
89.8	89.3	-1.53	26.086	32.683	26.313	1440.2
95.1	94.5	-1.37	26.263	32.730	26.347	1441.1
100.5	99.8	-1.25	26.482	32.899	26.481	1442.0
106.0	105.3	-1.54	26.522	33.264	26.784	1441.2
111.5	110.7	-1.50	26.686	33.451	26.935	1441.8
116.8	116.1	-1.38	26.945	33.673	27.111	1442.7
122.0	121.2	-1.31	27.182	33.878	27.275	1443.4
127.2	126.4	-0.78	27.798	34.158	27.484	1446.3
132.4	131.5	-0.60	28.088	34.308	27.586	1447.5
137.6	136.6	-0.42	28.318	34.430	27.688	1446.6
142.7	141.7	-0.33	28.437	34.488	27.730	1449.1
147.8	146.7	-0.23	28.580	34.583	27.786	1449.8
152.4	151.3	-0.13	28.691	34.593	27.804	1450.4
152.4	151.3	-0.12	28.710	34.613	27.821	1450.4

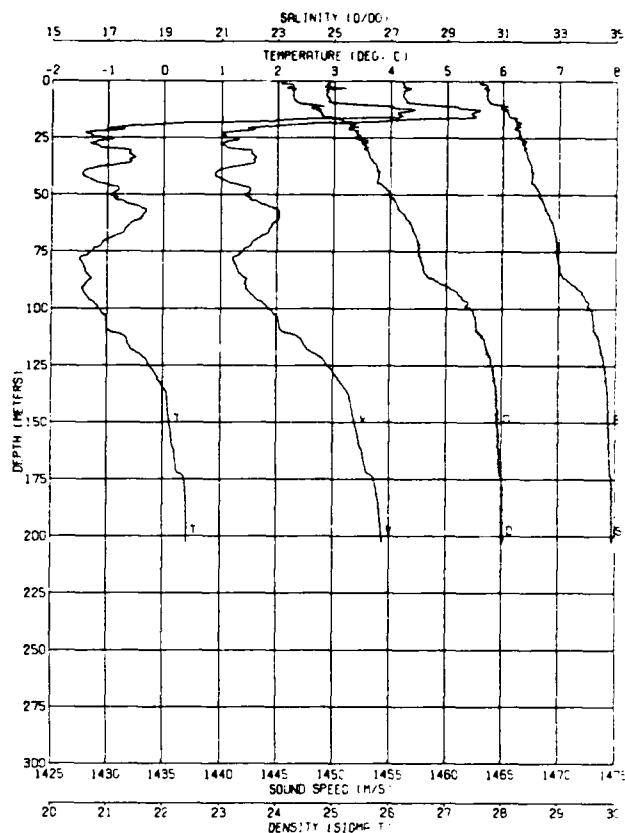
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.6	2.69	1452.7	23.57	29.49
10.4	2.65	1455.0	24.38	30.52
15.3	1.55	1452.2	24.73	30.90
20.1	1.15	1450.5	25.38	31.67
25.4	2.89	1457.3	25.44	31.87
30.1	2.16	1455.5	25.49	31.89
35.3	2.05	1455.3	25.81	32.27
40.1	1.42	1453.0	25.89	32.33
45.1	.92	1451.1	25.96	32.38
50.3	.38	1448.8	26.03	32.42
55.1	.16	1447.8	26.07	32.46
60.2	-.06	1447.4	26.10	32.49
65.3	-.24	1446.2	26.11	32.49
70.0	-.65	1444.5	26.16	32.53
75.1	-1.36	1441.6	26.27	32.64
80.1	-1.51	1440.8	26.31	32.68
85.1	-1.62	1440.3	26.35	32.73
90.1	-1.68	1440.0	26.38	32.76
95.1	-1.47	1440.9	26.40	32.79
100.2	-1.42	1441.8	26.69	33.15
110.3	-1.45	1442.5	27.08	33.63
120.3	-1.23	1444.2	27.44	34.09
130.1	-.62	1447.5	27.68	34.41
140.3	-.41	1449.0	27.78	34.54
150.1	-.15	1450.4	27.84	34.63
160.4	-.03	1451.4	27.90	34.72
170.2	.11	1452.2	27.94	34.78
180.0	.30	1453.3	27.98	34.84
190.0	.40	1454.1	28.02	34.89
197.6	.40	1454.2	28.00	34.87

Station Number 250 251 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 1802 Platform Ship Latitude 71 56.8 Longitude 155 21.8

250



251

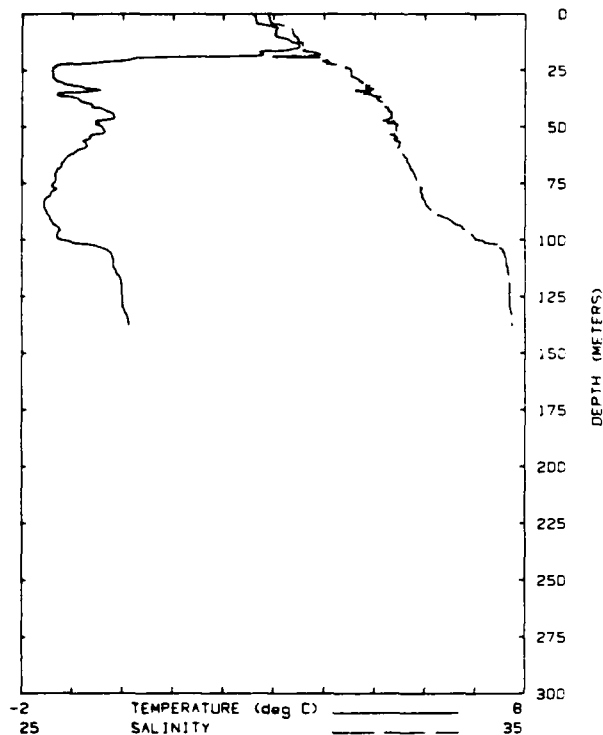


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.5	0.5	2.70	27.380	30.108	24.036	1454.7
4.8	4.5	2.89	27.593	30.172	24.072	1455.8
9.6	9.6	2.59	27.522	30.361	24.245	1454.7
14.8	14.7	3.01	29.177	31.088	24.712	1461.4
20.0	19.8	1.14	27.135	31.293	25.085	1449.6
25.1	25.0	-1.14	25.518	31.508	25.353	1439.5
30.4	30.2	-1.33	25.508	31.892	25.507	1438.9
35.7	35.5	-1.41	25.532	31.811	25.605	1438.8
41.0	40.8	-1.28	25.895	32.182	25.885	1439.9
46.3	46.0	-0.88	26.218	32.281	25.973	1441.6
51.6	51.3	-1.14	26.214	32.441	26.108	1441.1
56.9	56.6	-0.47	26.876	32.609	26.221	1444.6
62.1	61.7	-0.86	26.762	32.706	26.307	1443.8
67.2	66.8	-0.94	26.820	32.767	26.365	1442.8
72.5	72.0	-1.14	26.535	32.867	26.452	1442.0
77.7	77.2	-1.42	26.359	32.934	26.514	1442.9
83.0	82.4	-1.43	26.428	33.035	26.586	1441.1
88.2	87.7	-1.27	26.892	33.208	26.732	1442.2
93.5	92.9	-1.46	26.825	33.606	27.059	1441.9
98.7	98.1	-1.33	27.214	33.893	27.368	1443.1
104.0	103.3	-1.12	27.209	33.748	27.164	1443.8
109.2	108.5	-0.95	27.816	34.101	27.443	1445.2
114.5	113.7	-0.84	28.137	34.458	27.719	1447.2
119.7	118.9	-0.35	28.568	34.703	27.905	1448.0
124.9	124.0	-0.22	28.718	34.748	27.934	1449.7
130.2	129.3	-0.04	28.913	34.800	27.968	1450.7
135.3	134.4	0.08	28.987	34.783	27.949	1451.4
140.4	139.4	0.09	29.010	34.774	27.940	1451.5
145.5	144.5	0.11	29.208	35.009	28.128	1452.0
150.7	149.8	0.12	29.016	34.739	27.809	1451.7

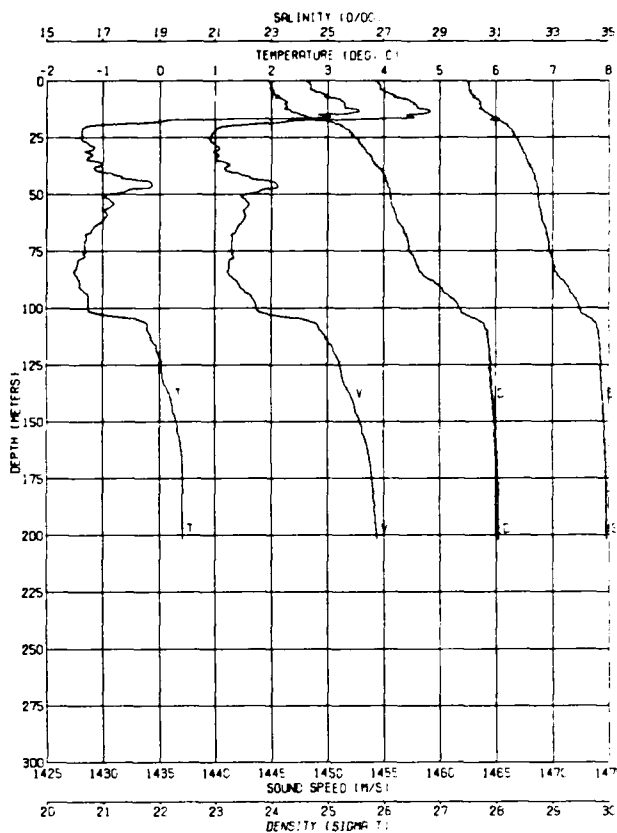
DEPTH	T (C)	V (M/S)	DENSITY S (0/00)
5.2	2.89	1456.2	24.29
11.2	3.49	1459.3	25.08
15.1	4.17	1462.3	24.82
20.1	-0.68	1444.4	25.37
25.1	-1.03	1441.3	25.35
30.1	-0.88	1441.6	25.52
35.0	-0.61	1443.0	25.65
40.1	-1.45	1439.7	25.75
45.1	-1.24	1440.7	25.99
50.0	-0.93	1442.3	26.01
55.2	-0.45	1444.4	26.14
60.1	-0.39	1445.2	26.27
65.2	-0.69	1444.3	26.40
70.2	-1.03	1443.0	26.45
75.1	-1.28	1442.0	26.49
80.1	-1.45	1441.3	26.53
85.3	-1.34	1441.9	26.65
90.3	-1.41	1442.3	27.01
95.1	-1.36	1443.0	27.28
100.5	-1.13	1444.4	27.47
110.2	-0.93	1445.7	27.61
120.4	-0.41	1448.6	27.82
130.1	-0.11	1450.3	27.88
140.3	0.08	1451.5	27.94
150.3	0.11	1452.0	27.96
160.2	0.17	1452.4	27.95
170.1	0.25	1452.9	27.96
180.4	0.40	1453.9	28.01
190.2	0.42	1454.2	28.02
200.2	0.42	1454.4	28.02
202.9	0.43	1454.5	28.03

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude
 252 X X 257 1855 Ship 71 54.0 155 17.7
 253

252



253



PRESSURE (dbar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

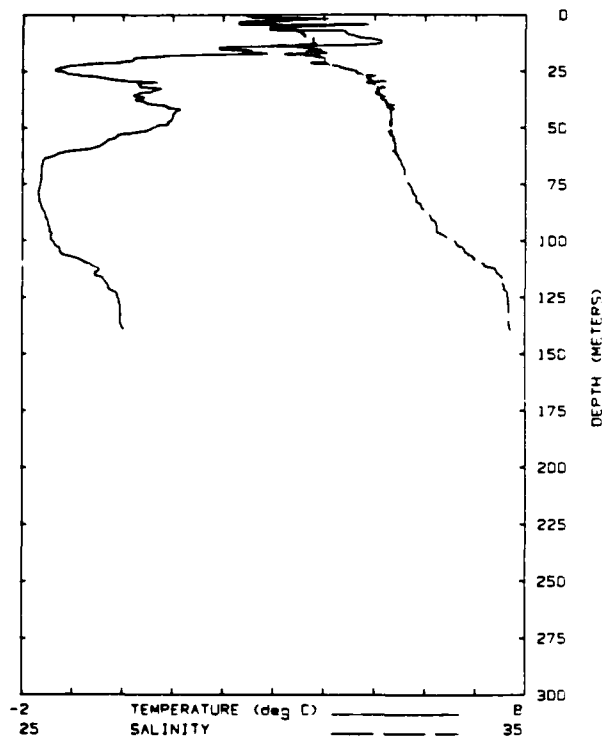
0.5	0.5	2.84	27.186	29.916	23.887	1454.2
0.4	0.4	2.82	27.187	29.907	23.881	1454.1
4.9	4.9	2.78	27.482	30.142	24.055	1455.2
10.0	10.0	9.07	27.940	30.416	24.252	1456.8
15.1	15.0	9.52	28.488	30.819	24.375	1459.1
20.1	20.0	0.25	28.231	31.026	24.916	1445.2
25.0	24.9	-1.38	25.339	31.533	25.379	1438.3
30.2	30.0	-1.31	25.532	31.709	25.520	1439.0
35.3	35.1	-1.02	25.783	31.711	25.514	1440.5
40.3	40.1	-0.61	26.482	32.210	25.804	1443.2
45.4	45.1	-0.18	26.908	32.343	25.894	1445.4
50.4	50.1	-0.41	26.789	32.427	26.071	1444.5
55.5	55.2	-0.64	26.633	32.461	26.109	1443.6
60.8	60.2	-0.87	26.478	32.500	26.147	1442.6
66.0	65.6	-1.18	26.366	32.660	26.285	1441.8
71.7	71.3	-1.34	26.330	32.800	26.403	1441.0
77.0	76.6	-1.40	26.364	32.909	26.493	1441.0
83.0	82.4	-1.54	26.309	32.993	26.565	1440.5
89.0	88.4	-1.50	26.472	33.186	26.704	1441.0
94.7	94.1	-1.30	27.043	33.727	27.153	1442.8
100.4	99.7	-1.38	27.282	34.007	27.378	1443.5
105.3	104.6	-0.30	28.502	34.562	27.789	1448.8
110.2	109.5	-0.18	28.850	34.821	27.830	1449.5
115.0	114.3	-0.12	28.731	34.859	27.858	1449.9
119.8	119.0	-0.02	28.836	34.885	27.873	1450.5
124.5	123.7	-0.00	28.868	34.700	27.884	1450.6
129.3	128.4	0.01	28.882	34.702	27.886	1450.8
133.9	133.0	0.08	28.973	34.738	27.910	1451.2
138.6	137.6	0.13	29.022	34.746	27.914	1451.5
143.7	137.7	0.13	29.023	34.745	27.914	1451.5

DEPTH T (C) V (M/S) DENSITY S (0/00)

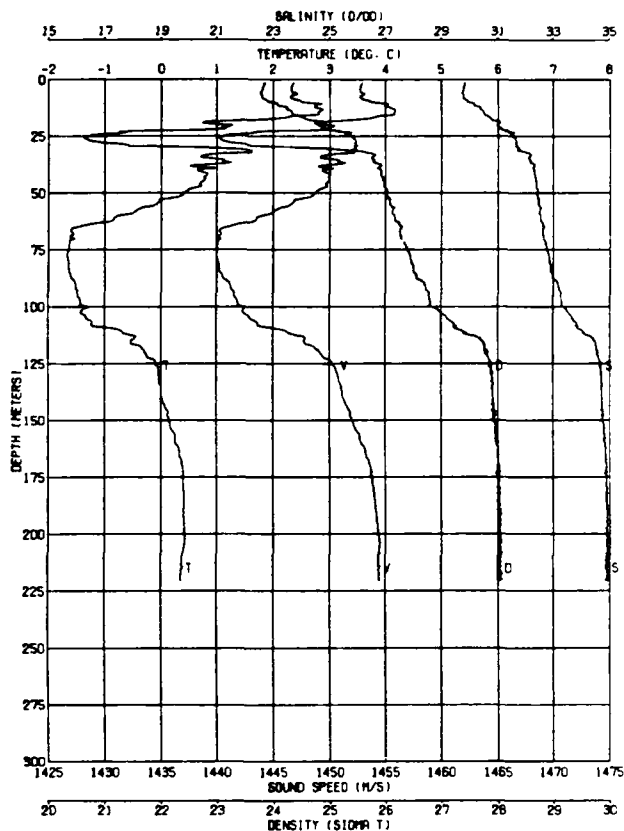
5.1	2.82	1455.3	24.07	30.16
10.1	3.31	1457.7	24.24	30.41
15.3	2.78	1457.0	24.59	30.82
20.3	-1.30	1441.1	25.18	31.31
25.1	-1.37	1440.0	25.40	31.57
30.1	-1.16	1440.7	25.55	31.76
35.3	-1.27	1440.3	25.76	32.01
40.2	-1.05	1441.4	25.96	32.27
45.6	-1.14	1445.5	26.08	32.45
50.2	-0.89	1442.9	26.10	32.45
55.2	-0.84	1443.0	26.14	32.49
60.2	-0.95	1442.7	26.21	32.57
65.1	-1.17	1442.0	26.33	32.72
70.0	-1.29	1441.6	26.43	32.84
75.4	-1.30	1441.7	26.47	32.88
80.1	-1.45	1441.2	26.57	33.00
85.1	-1.50	1441.3	26.69	33.15
90.2	-1.41	1442.2	26.98	33.51
95.2	-1.25	1443.3	27.19	33.78
100.1	-1.26	1443.7	27.36	33.98
110.2	-0.20	1449.4	27.89	34.69
120.1	-0.03	1450.6	27.90	34.72
130.1	0.05	1451.2	27.92	34.75
140.2	0.20	1452.2	27.96	34.81
150.2	0.29	1452.8	27.98	34.84
160.1	0.37	1453.5	28.03	34.91
170.1	0.41	1453.8	28.02	34.90
180.0	0.41	1454.0	28.05	34.94
190.3	0.41	1454.2	28.04	34.92
200.3	0.41	1454.3	28.03	34.91
201.5	0.41	1454.4	28.03	34.91

Station Number 254 255 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 2016 Platform Ship Latitude 71 50.2 Longitude 155 13.3

254



255



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY
(dbar) (M) (deg C) (ms/cm) (M/sec)

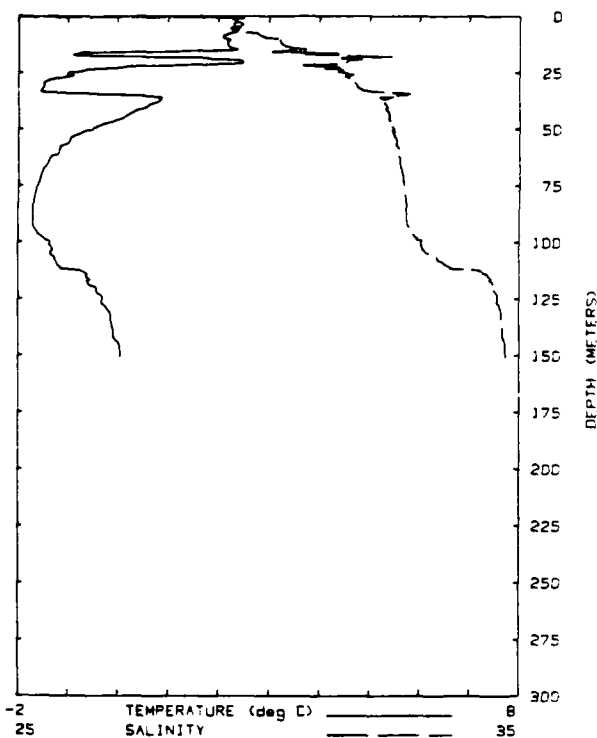
0.7	0.7	2.64	27.256	29.994	23.948	1454.3
4.6	4.5	2.78	28.822	31.904	25.460	1457.3
8.0	8.7	4.63	29.347	30.607	24.261	1463.7
15.1	15.1	1.94	27.310	30.721	24.578	1452.4
20.5	20.4	0.19	28.150	30.890	24.890	1444.9
25.8	25.7	-1.13	25.824	31.642	25.461	1439.7
31.2	31.1	0.33	27.057	32.013	25.705	1447.1
36.7	36.5	0.40	27.268	32.209	25.859	1447.8
42.1	41.9	1.12	27.872	32.367	25.847	1451.3
47.4	47.1	0.87	27.823	32.328	25.825	1450.7
52.7	52.4	0.23	27.218	32.313	25.851	1447.4
58.1	57.7	-0.40	26.782	32.405	26.053	1444.7
63.8	62.5	-1.47	25.973	32.467	26.137	1439.8
69.3	68.0	-1.82	25.954	32.588	26.215	1438.7
75.5	75.0	-1.84	26.011	32.888	26.328	1439.5
81.6	81.1	-1.86	26.086	32.829	26.435	1438.7
87.7	87.1	-1.57	26.327	33.044	26.607	1440.5
93.5	92.9	-1.48	26.536	33.230	26.755	1441.3
99.7	98.1	-1.43	26.713	33.416	26.804	1441.8
104.4	103.7	-1.25	27.136	33.787	27.200	1443.3
110.1	109.3	-0.77	27.711	34.032	27.381	1445.9
115.2	114.4	-0.35	28.213	34.451	27.710	1447.8
120.3	119.4	-0.31	28.512	34.575	27.789	1449.0
125.3	124.5	-0.08	28.780	34.857	27.854	1450.2
130.4	129.5	-0.03	28.827	34.878	27.869	1450.6
135.4	134.5	-0.03	28.829	34.878	27.869	1450.6
140.3	139.4	0.02	28.898	34.702	27.885	1451.0
140.2	139.3	0.03	28.909	34.710	27.891	1451.1

DEPTH T (C) V (M/S) DENSITY S (0/00)

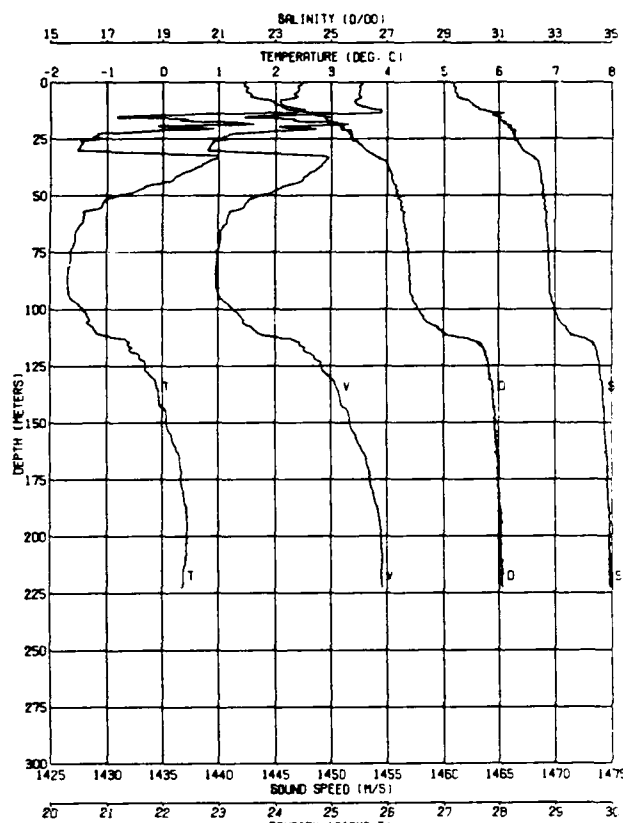
5.6	2.35	1452.7	23.78	29.75
10.4	2.69	1454.6	24.08	30.15
15.3	2.81	1455.8	24.35	30.50
20.3	1.28	1450.2	24.80	30.95
25.1	-1.31	1440.6	25.40	31.57
30.2	1.00	1448.7	25.47	31.74
35.1	1.08	1450.4	25.77	32.13
40.3	.70	1449.4	25.94	32.32
45.3	.72	1449.8	25.99	32.39
50.3	.41	1448.6	26.01	32.40
55.3	-.13	1446.5	26.08	32.46
60.3	-.79	1443.8	26.16	32.52
65.3	-1.55	1440.6	26.27	32.63
70.3	-1.54	1440.3	26.26	32.62
75.4	-1.65	1440.0	26.39	32.77
80.3	-1.65	1440.1	26.48	32.88
85.1	-1.62	1440.3	26.52	32.94
90.1	-1.52	1441.1	26.70	33.16
95.1	-1.47	1441.6	26.79	33.27
100.1	-1.28	1442.6	26.86	33.37
110.2	-.73	1445.9	27.34	33.98
120.0	-.29	1449.1	27.80	34.57
130.1	-.04	1450.7	27.89	34.71
140.3	.01	1451.2	27.91	34.73
150.5	.14	1452.0	27.92	34.75
160.5	.27	1452.9	27.97	34.82
170.4	.39	1453.7	28.02	34.89
180.5	.41	1454.0	28.03	34.91
190.4	.41	1454.2	28.04	34.92
200.3	.42	1454.4	28.02	34.89
210.4	.39	1454.4	28.01	34.88
220.2	.36	1454.4	28.00	34.87
220.2	.36	1454.5	28.06	34.94

Station ASL APL Julian GMT Platform Latitude Longitude
 Number Cast Cast Day hhmm Ship 71 48.5 155 11.6
 256 X X 257 2109
 257

256



257

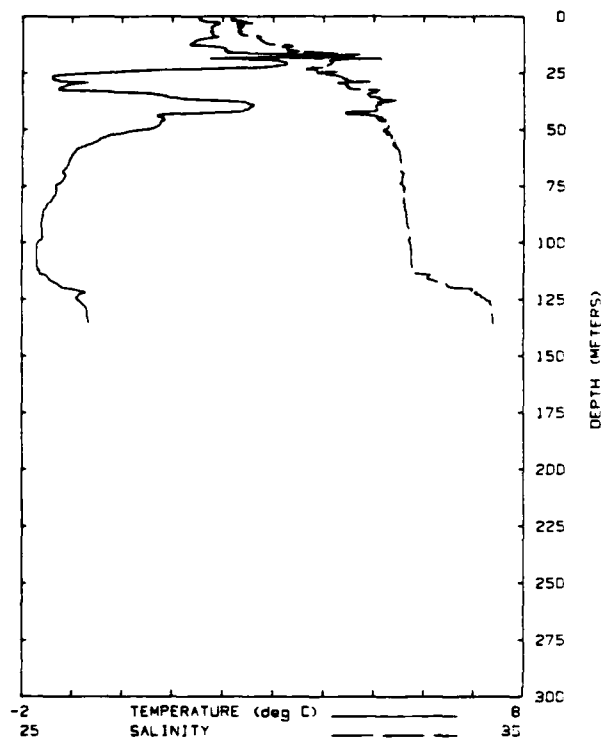


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (MS/CM)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC)
1.3	1.3	2.37	26.449	29.271	23.392	1452.1
6.2	6.1	2.37	26.482	29.291	23.399	1452.3
11.2	11.1	2.19	27.091	30.216	24.158	1452.8
16.1	16.0	0.39	25.590	30.058	24.132	1444.5
20.9	20.8	2.48	26.394	31.526	25.181	1455.9
25.7	25.6	-1.00	25.631	31.516	25.356	1440.1
31.0	30.9	-1.48	25.428	31.743	25.551	1438.3
36.4	36.2	0.84	27.828	32.221	25.846	1449.8
41.4	41.1	0.50	27.425	32.308	25.934	1448.4
46.2	46.0	-0.01	27.078	32.386	26.021	1446.3
51.1	50.8	-0.59	26.854	32.442	26.090	1443.7
56.4	56.1	-0.88	26.424	32.552	26.192	1442.1
62.2	61.9	-1.27	26.206	32.569	26.215	1440.9
68.3	67.8	-1.50	26.084	32.644	26.291	1440.0
74.2	73.7	-1.59	26.040	32.680	26.313	1439.7
78.5	78.0	-1.86	26.017	32.720	26.346	1439.4
83.2	84.7	-1.70	26.009	32.746	26.368	1439.5
81.2	80.6	-1.70	26.017	32.762	26.381	1439.5
87.1	86.5	-1.60	26.183	32.869	26.466	1440.3
102.9	102.2	-1.33	26.548	33.070	26.621	1441.9
108.1	107.4	-1.26	26.829	33.373	26.864	1442.8
113.3	112.5	-0.78	27.822	34.200	27.517	1446.1
118.2	117.4	-0.61	28.157	34.443	27.706	1447.4
123.2	122.4	-0.41	28.391	34.526	27.764	1448.5
128.1	127.2	-0.31	28.513	34.571	27.796	1449.1
133.0	132.1	-0.13	28.719	34.647	27.849	1450.1
137.8	137.0	-0.11	28.753	34.858	27.857	1450.3
142.7	141.7	-0.08	28.781	34.865	27.861	1450.5
147.7	146.8	0.04	28.828	34.715	27.895	1451.2
151.6	150.8	0.06	28.946	34.718	27.896	1451.4

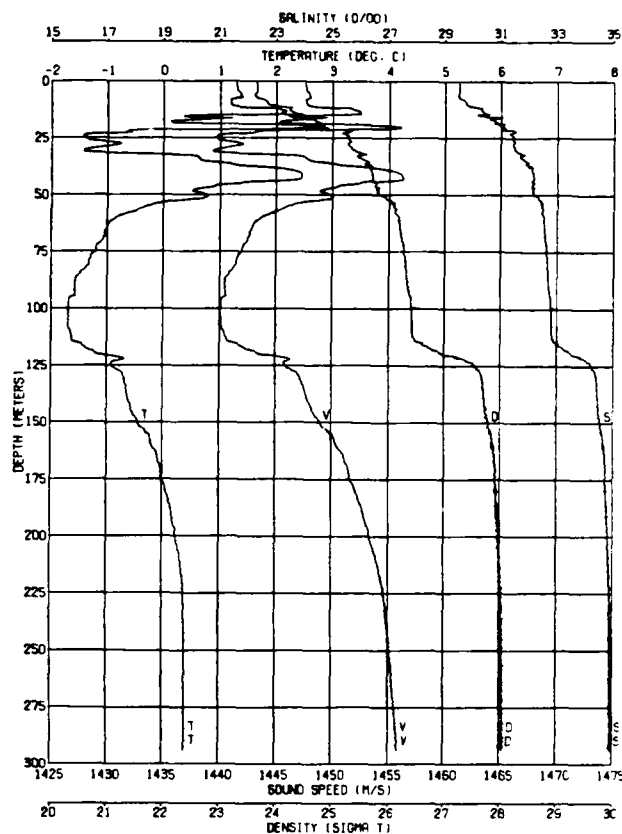
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	2.34	1452.5	23.57	29.49
10.3	2.15	1452.5	24.06	30.09
15.3	-0.82	1443.0	24.90	30.98
20.3	-0.58	1447.2	25.23	31.43
25.4	-1.16	1440.7	25.38	31.55
30.2	-1.52	1439.1	25.63	31.84
35.3	-0.81	1449.5	26.00	32.40
40.2	-0.34	1448.0	26.08	32.47
45.1	-0.16	1446.3	26.15	32.54
50.2	-0.83	1443.6	26.26	32.64
55.3	-1.11	1442.2	26.26	32.64
60.3	-1.43	1440.8	26.30	32.67
65.2	-1.54	1440.3	26.34	32.72
70.3	-1.57	1440.1	26.35	32.73
75.1	-1.64	1439.9	26.39	32.77
80.1	-1.67	1439.9	26.40	32.79
85.1	-1.70	1439.8	26.42	32.81
90.1	-1.68	1439.9	26.41	32.79
95.2	-1.64	1440.2	26.45	32.85
100.1	-1.42	1441.4	26.57	33.00
110.2	-1.19	1443.4	26.97	33.50
120.1	-0.40	1448.4	27.73	34.48
130.1	-0.16	1450.0	27.84	34.63
140.2	-0.06	1450.8	27.88	34.69
150.1	0.07	1451.7	27.93	34.76
160.4	0.23	1452.7	27.99	34.84
170.1	0.33	1453.3	27.96	34.81
180.5	0.37	1453.8	28.00	34.87
190.2	0.43	1454.3	28.05	34.94
200.4	0.44	1454.5	28.05	34.94
210.4	0.41	1454.5	28.02	34.90
220.3	0.37	1454.5	28.05	34.94
222.2	0.35	1454.5	28.07	34.95

Station Number 258 259 ASL Cast X APL Cast X Julian Day 257 GMT hhmm 2210 Platform Ship Latitude 71 45.6 Longitude 155 8.2

258



259



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY
(dbar) (M) (deg C) (mS/cm)

11.5	11.5	1.43	26.180	28.810	23.081	1448.9
16.6	16.5	2.42	27.853	31.053	24.809	1454.9
21.7	21.6	3.26	28.897	31.129	26.802	1458.8
26.7	26.6	-1.39	25.174	31.286	25.187	1438.1
31.8	31.6	-1.22	25.439	31.486	25.337	1439.2
36.8	36.6	1.22	27.816	32.067	25.700	1451.3
41.8	41.6	2.47	28.785	32.003	25.562	1456.8
46.7	46.5	0.79	27.597	32.229	25.856	1449.7
51.6	51.3	0.12	27.123	32.308	25.951	1446.9
56.5	56.1	-0.56	26.671	32.431	26.080	1443.9
61.4	61.0	-0.89	26.403	32.520	26.166	1442.2
66.2	65.6	-1.08	26.334	32.534	26.181	1441.8
71.7	71.3	-1.15	26.308	32.565	26.209	1441.6
77.5	77.1	-1.32	26.194	32.582	26.235	1440.9
83.3	82.8	-1.48	26.079	32.610	26.253	1440.2
89.1	88.6	-1.57	26.045	32.659	26.295	1440.0
94.4	93.8	-1.60	26.080	32.704	26.332	1440.0
99.8	99.2	-1.61	26.047	32.694	26.324	1440.0
105.6	104.9	-1.71	26.008	32.742	26.365	1439.7
111.1	110.4	-1.70	26.029	32.765	26.383	1439.8
116.8	116.1	-1.45	26.485	33.087	26.838	1441.6
121.8	121.1	-0.92	27.535	33.955	27.324	1445.3
126.8	126.1	-0.83	27.880	34.531	27.825	1446.3
131.8	130.8	-0.89	28.043	34.371	27.651	1447.1
136.7	135.7	-0.88	28.085	34.381	27.866	1447.4
138.8	135.7	-0.88	28.084	34.387	27.863	1447.4

DEPTH T (C) V (M/S) DENSITY S (0/00)

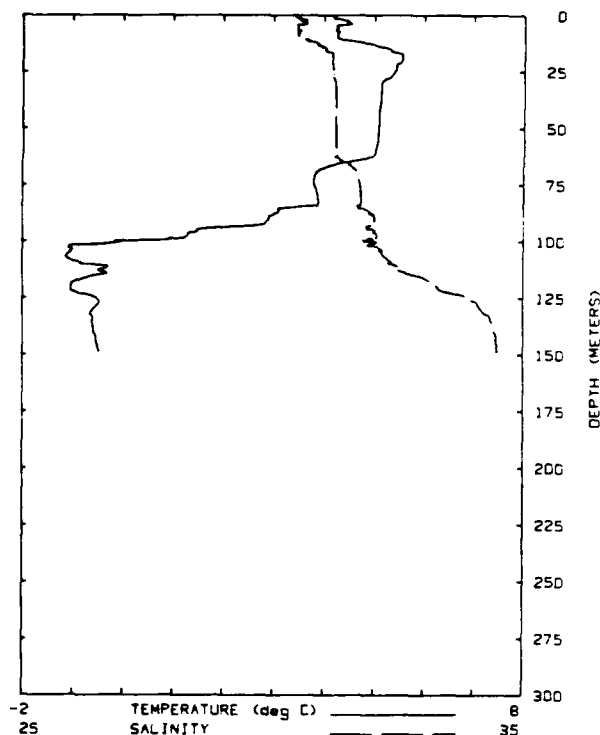
5.1	1.36	1447.9	23.64	29.50
10.1	1.19	1447.7	23.86	29.76
15.1	.61	1447.5	24.44	30.47
20.3	2.88	1456.1	24.84	31.10
25.9	-1.34	1439.8	25.29	31.43
30.1	-1.33	1439.8	25.36	31.51
35.4	.81	1448.7	25.64	31.95
40.3	2.44	1455.8	25.70	32.15
45.1	1.32	1452.3	25.80	32.19
50.0	.73	1449.9	25.86	32.23
55.3	-.32	1445.9	26.07	32.44
60.1	-.84	1443.7	26.19	32.56
65.2	-1.01	1442.8	26.19	32.56
70.2	-1.08	1442.4	26.23	32.59
75.1	-1.21	1441.9	26.27	32.64
80.1	-1.33	1441.4	26.29	32.67
85.3	-1.51	1440.7	26.31	32.68
90.2	-1.57	1440.5	26.35	32.72
95.3	-1.66	1440.3	26.39	32.78
100.2	-1.70	1440.0	26.43	32.82
110.3	-1.65	1440.3	26.42	32.81
120.3	-1.12	1443.8	27.05	33.60
130.3	-.69	1447.2	27.68	34.40
140.4	-.62	1447.9	27.72	34.45
150.4	-.44	1449.1	27.81	34.58
160.1	-.19	1450.5	27.86	34.65
170.2	-.04	1451.5	27.92	34.74
180.0	.07	1452.2	27.94	34.77
190.0	.17	1452.9	27.95	34.79
201.1	.24	1453.4	27.96	34.81
210.2	.32	1454.0	28.00	34.87
220.2	.37	1454.5	28.03	34.90
230.1	.38	1454.7	28.03	34.90
240.1	.40	1455.0	28.05	34.93
250.2	.40	1455.2	28.06	34.94
260.1	.42	1455.4	28.06	34.94
270.0	.39	1455.5	28.05	34.94
280.3	.39	1455.6	28.05	34.94
290.0	.39	1455.8	28.06	34.94
293.2	.40	1455.8	28.05	34.93

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

260 X X 257 2313 Ship 71 42.8 155 4.5

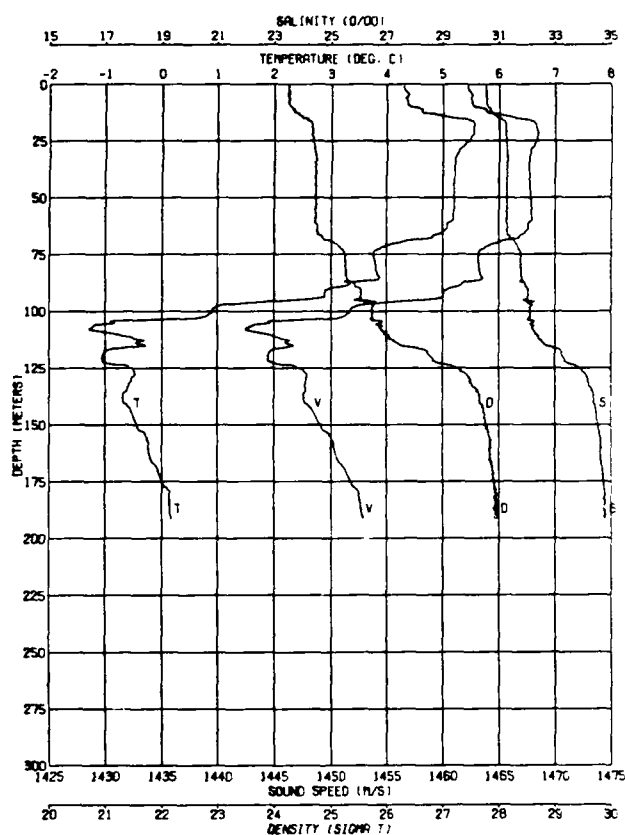
261

260



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
10.5	10.4	4.30	28.010	30.530	24.233	1462.2
15.8	15.7	5.32	30.269	31.018	24.512	1467.2
21.1	21.0	6.53	30.556	31.156	24.589	1468.2
27.0	26.9	6.33	30.441	31.200	24.655	1467.6
33.3	33.1	5.13	30.302	31.230	24.701	1466.9
38.6	38.4	5.11	30.281	31.228	24.702	1466.9
44.8	44.6	5.08	30.276	31.233	24.708	1466.8
51.0	50.7	6.07	30.264	31.228	24.706	1467.0
57.3	57.0	5.05	30.251	31.234	24.713	1467.0
63.2	62.8	4.88	30.158	31.273	24.760	1466.5
68.4	68.0	3.95	28.678	31.611	25.123	1463.1
73.8	73.1	3.80	28.833	31.702	25.209	1462.6
78.8	78.4	3.86	28.704	31.726	25.223	1463.0
84.3	83.8	3.88	28.755	31.747	25.236	1463.3
89.6	89.0	2.82	28.181	32.011	25.532	1459.6
94.8	94.3	1.80	28.141	31.856	25.494	1454.5
100.3	99.6	0.86	27.394	31.858	25.554	1450.4
106.1	105.4	-1.06	26.088	32.184	25.881	1442.0
112.0	111.2	-0.29	26.931	32.452	26.087	1446.1
117.4	116.6	-0.77	26.878	33.031	26.572	1444.7
123.1	122.3	-1.01	27.069	33.418	26.892	1444.2
128.3	127.5	-0.46	28.022	34.083	27.417	1447.8
133.5	132.8	-0.84	28.052	34.324	27.611	1447.3
138.7	137.7	-0.80	28.143	34.388	27.689	1447.7
143.8	142.8	-0.54	28.235	34.452	27.710	1448.1
148.7	147.7	-0.48	28.308	34.484	27.734	1448.5
148.6	148.6	-0.47	28.321	34.487	27.736	1448.6

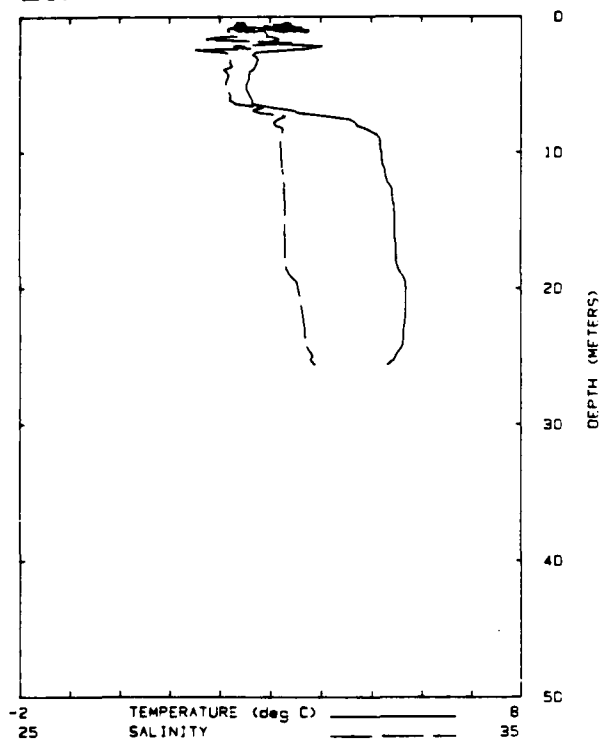
261



DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	4.38	1462.6	24.26	30.55
10.1	4.45	1463.0	24.30	30.61
15.3	5.29	1466.8	24.61	31.10
20.4	5.55	1468.3	24.67	31.21
25.5	5.44	1468.2	24.69	31.23
30.1	5.28	1467.8	24.72	31.25
35.0	5.22	1467.6	24.74	31.27
40.6	5.22	1467.7	24.74	31.27
45.4	5.20	1467.7	24.73	31.25
50.2	5.20	1467.8	24.74	31.27
55.2	5.21	1467.8	24.72	31.25
60.2	5.18	1467.9	24.74	31.27
65.1	5.00	1467.3	24.76	31.28
70.2	4.18	1464.7	25.06	31.57
75.3	3.77	1463.2	25.26	31.77
80.1	3.81	1463.3	25.25	31.75
85.1	3.88	1463.6	25.28	31.79
90.1	2.97	1460.5	25.52	32.00
95.1	2.38	1458.2	25.43	31.84
100.2	.92	1451.8	25.74	32.10
110.1	-.79	1444.3	25.96	32.28
120.4	-1.04	1444.5	26.82	33.33
130.0	-.54	1447.8	27.51	34.20
140.2	-.66	1447.8	27.67	34.39
150.2	-.43	1449.1	27.78	34.55
160.4	-.24	1450.3	27.87	34.67
170.1	-.07	1451.3	27.89	34.70
180.0	.13	1452.4	27.93	34.76
190.0	.16	1452.8	27.95	34.79
191.0	.16	1452.9	27.97	34.81

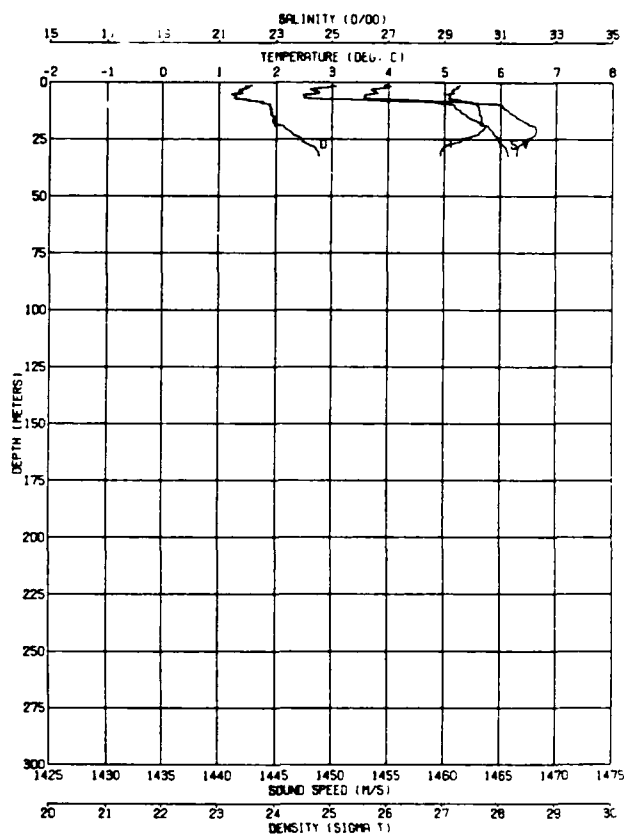
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
262	X		258	0046	Ship	71 33.7	154 49.9
263		X					

262



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
3.2	3.2	2.76	26.700	29.211	23.316	1453.8
8.1	8.0	4.72	28.978	30.110	23.859	1463.4
12.8	12.8	5.42	29.693	30.285	23.924	1466.6
17.7	17.6	5.50	29.784	30.310	23.934	1467.0
22.5	22.4	5.66	30.328	30.862	24.184	1468.2
25.7	25.6	5.31	30.150	30.891	24.413	1467.1

263



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	2.52	1453.2	23.29	29.15
10.3	5.16	1465.3	23.84	30.12
15.4	5.43	1466.6	23.92	30.25
20.4	5.69	1468.3	24.15	30.58
25.1	5.30	1467.4	24.44	30.91
30.1	4.93	1466.5	24.74	31.24
32.3	4.93	1466.5	24.80	31.31

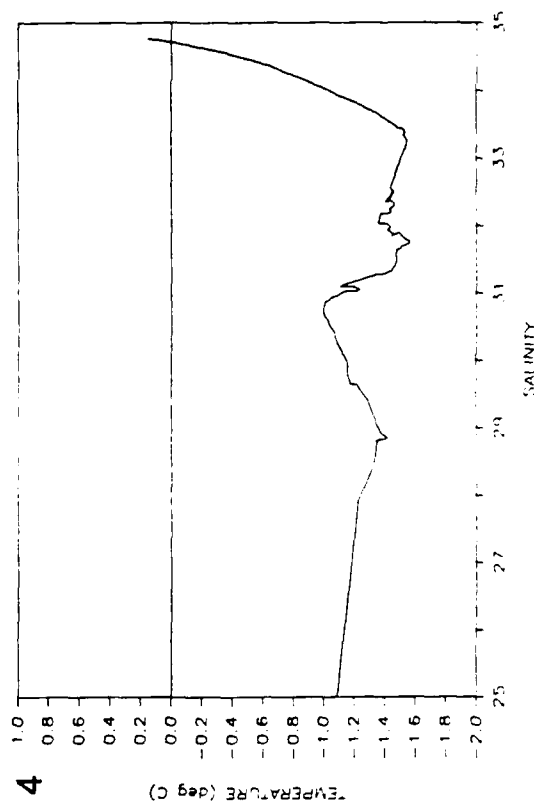
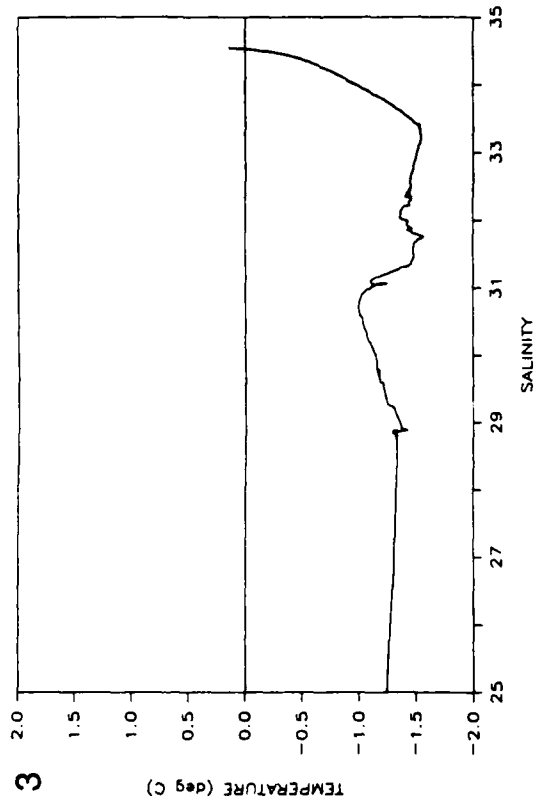
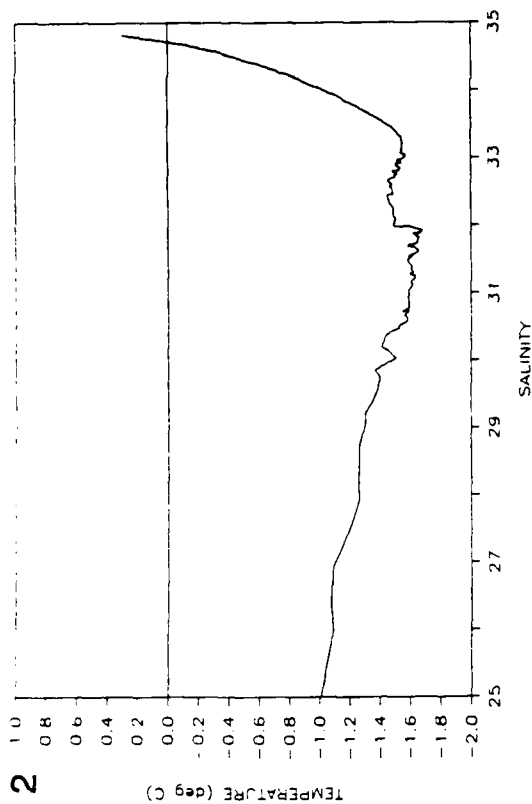
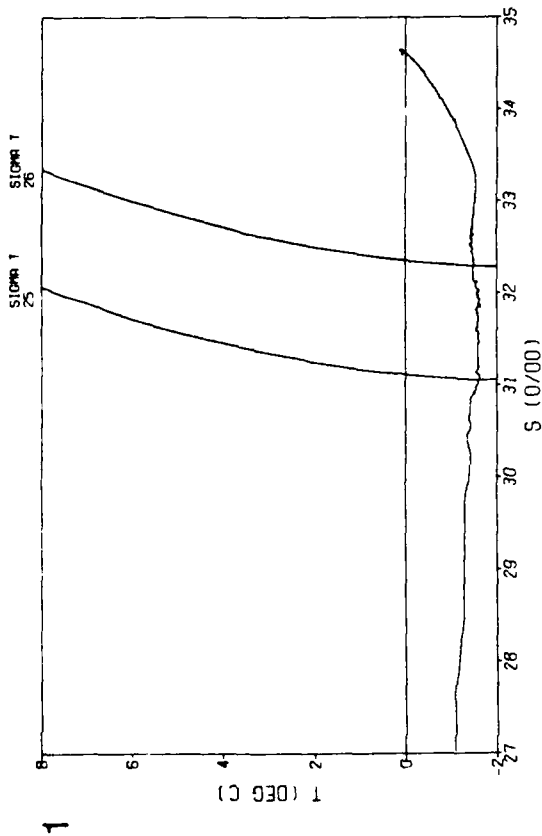
APPENDIX B

TS Diagrams

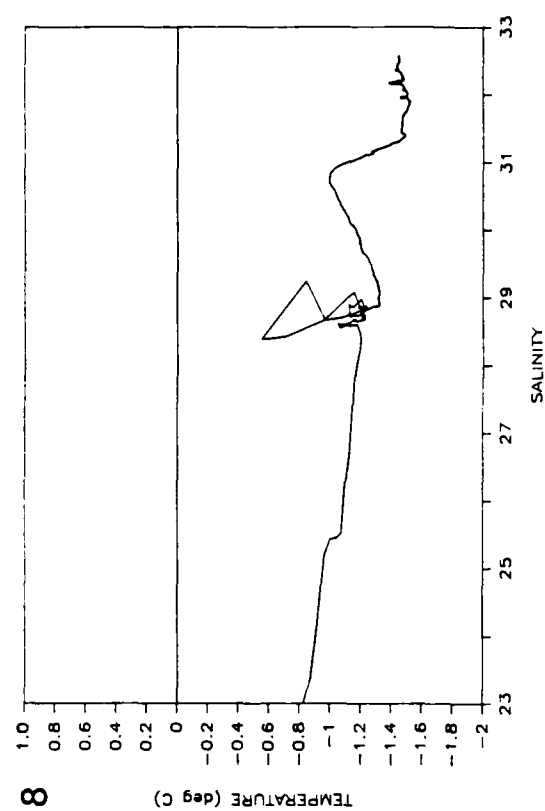
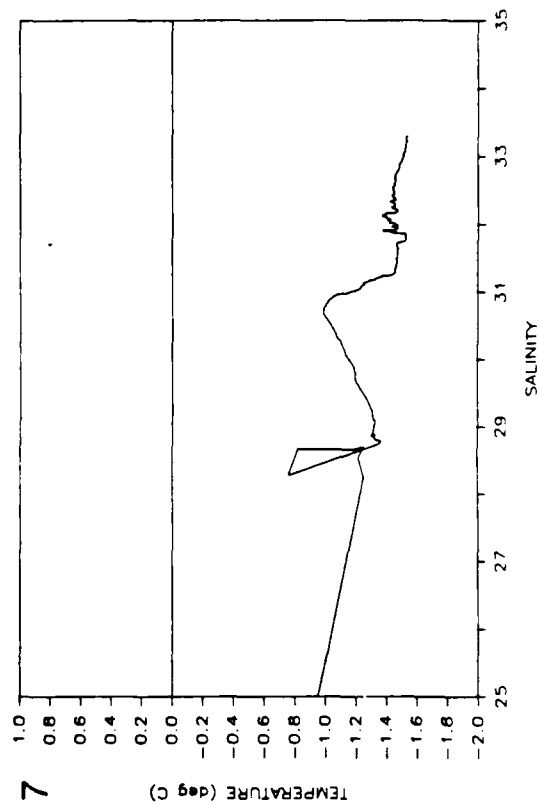
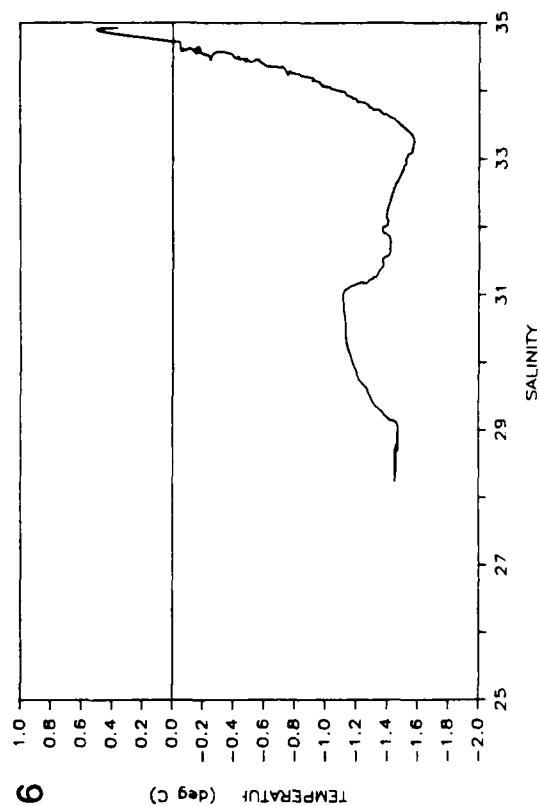
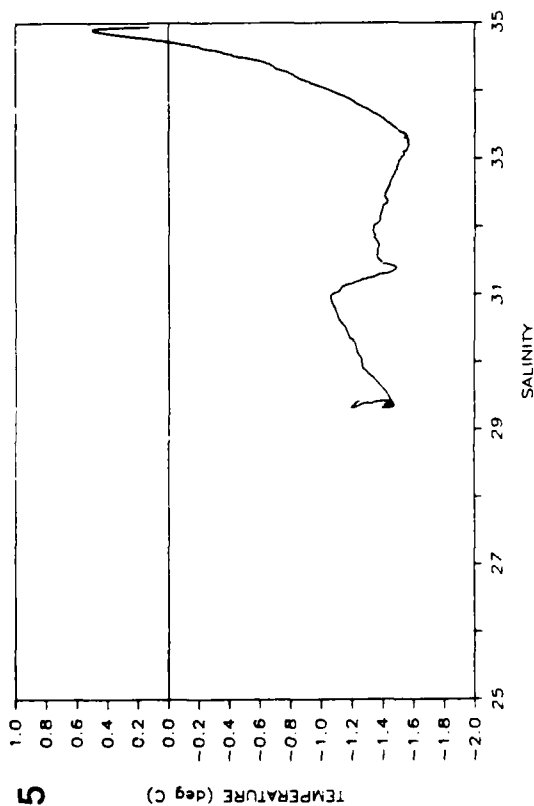
This appendix contains temperature-salinity diagrams constructed from CTD profiles taken by the Applied Physics Laboratory (APL) and the Arctic Submarine Laboratory (ASL) from 17 August to 20 September 1985. See Table II for list of stations.

Station Number ASL Cast APL Cast Julian Day GMT h:mm Platform Latitude Longitude

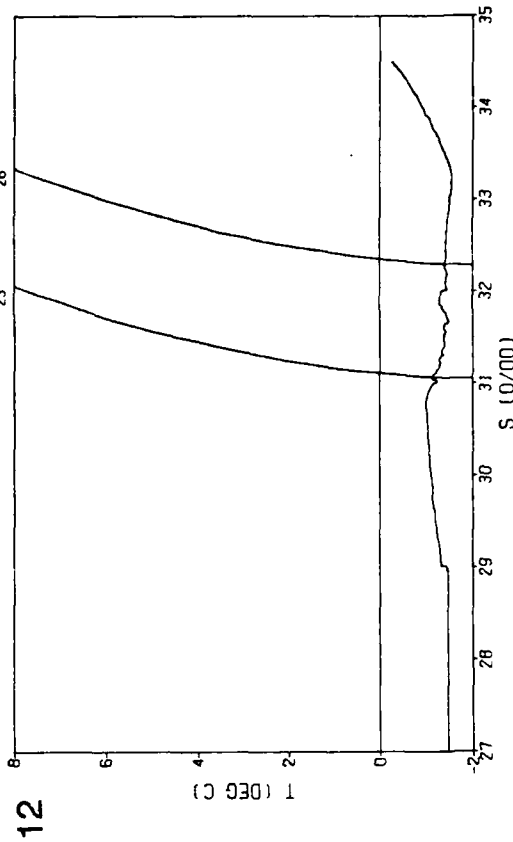
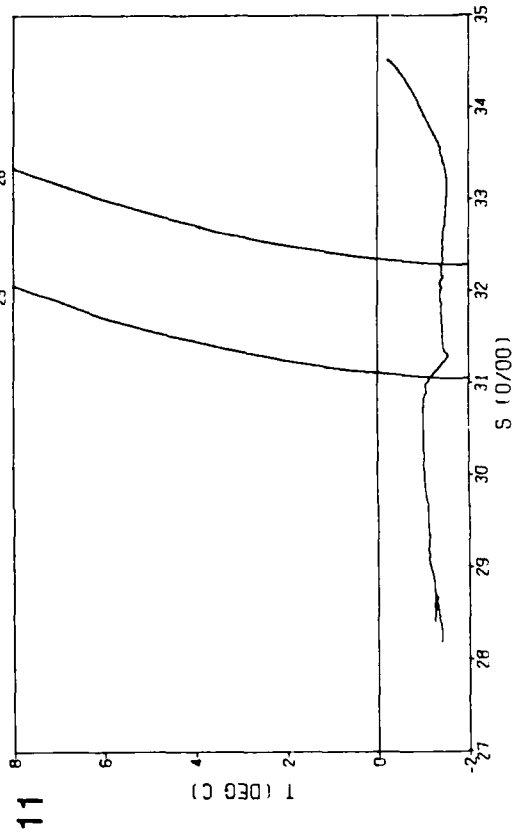
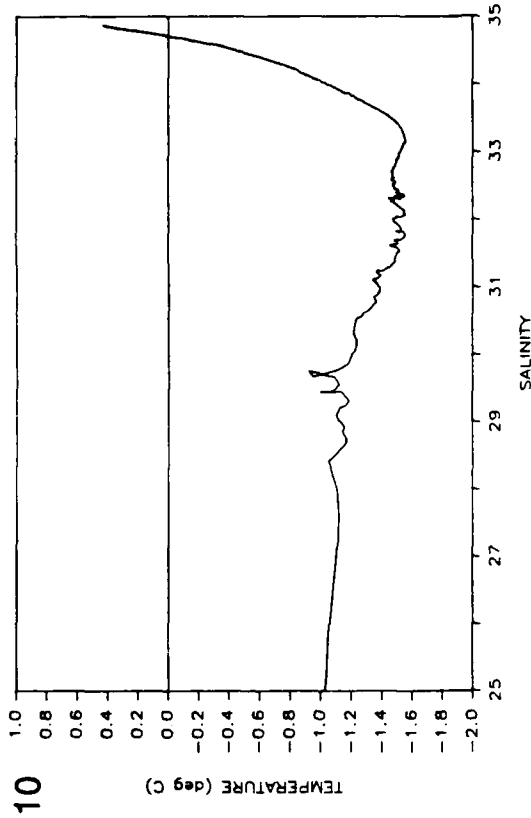
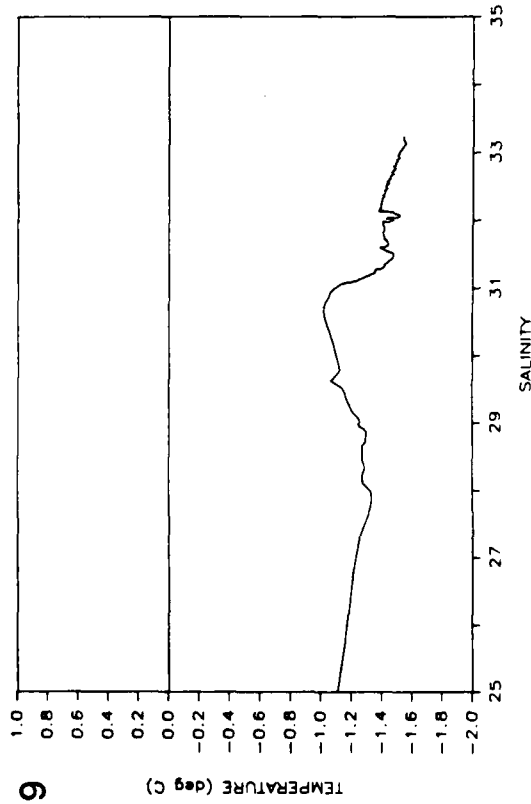
1					229	Ship	70 11.1	138 44.1
2	X	X			2312	Ship	70 11.1	138 44.1
3	X	X			1849	Ship	71 3.6	134 6.7
4	X	X			1918	Ship	71 3.6	134 6.7



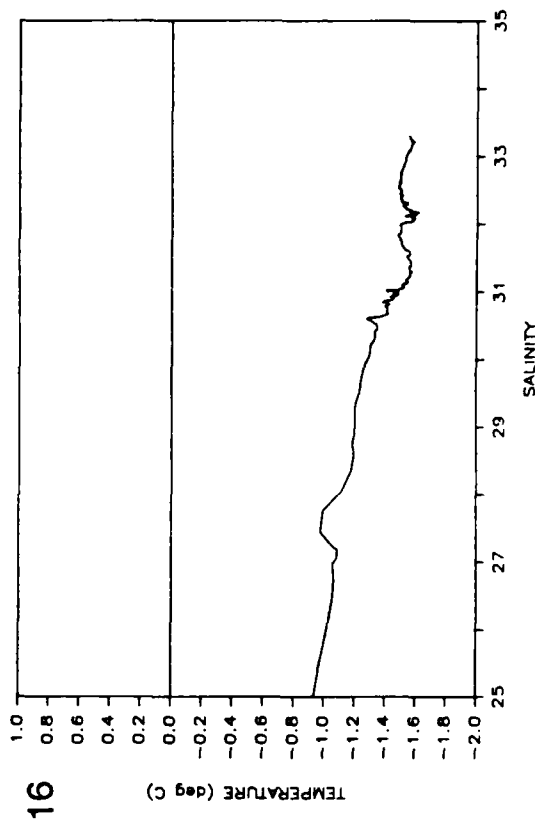
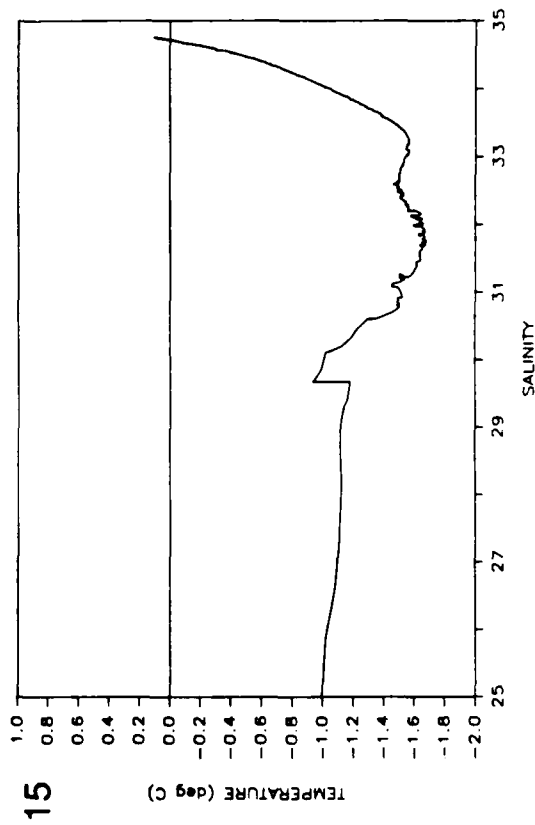
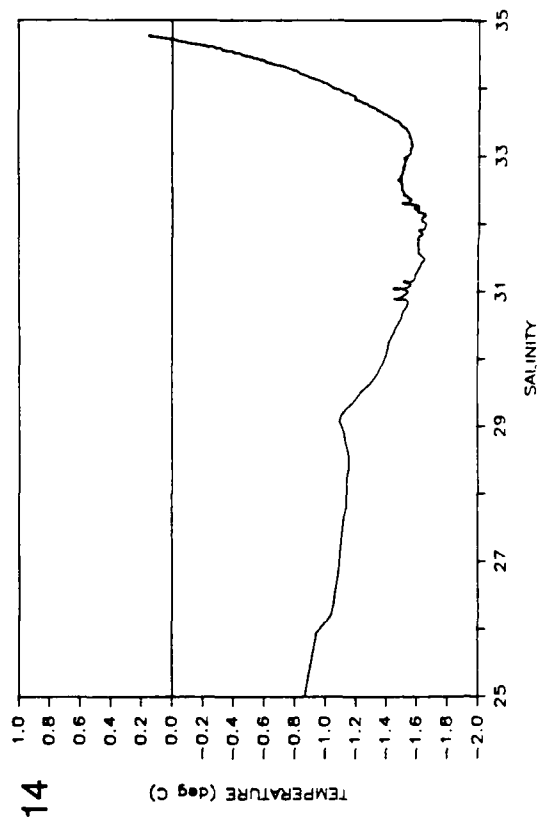
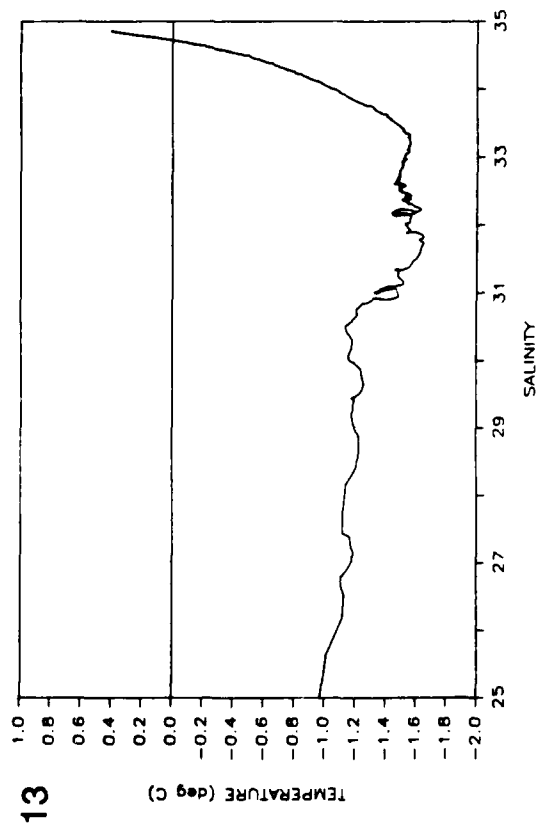
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
5	X		231	1554	Ship	71 33.9	133 59.5
6	X		232	0945	Ship	71 18.9	134 0.0
7	X		233	0147	Ship	71 8.2	134 9.7
8	X		233	0214	Ship	71 8.2	134 9.7



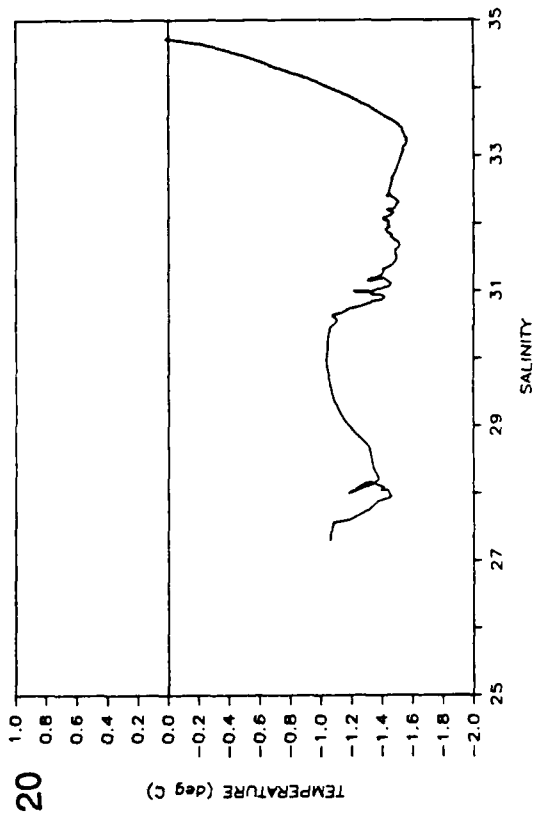
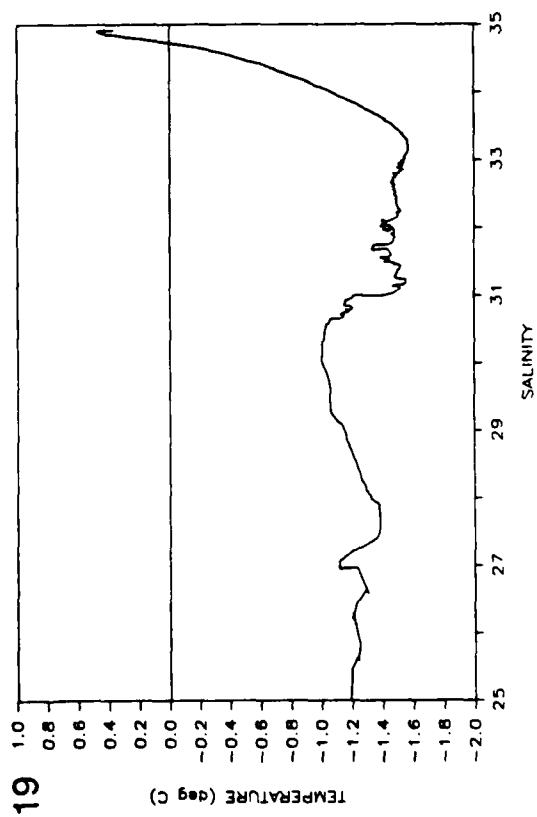
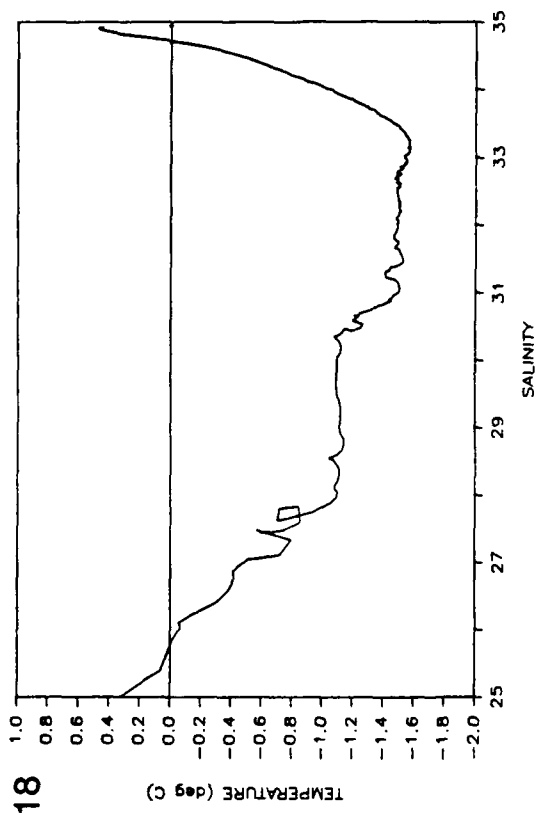
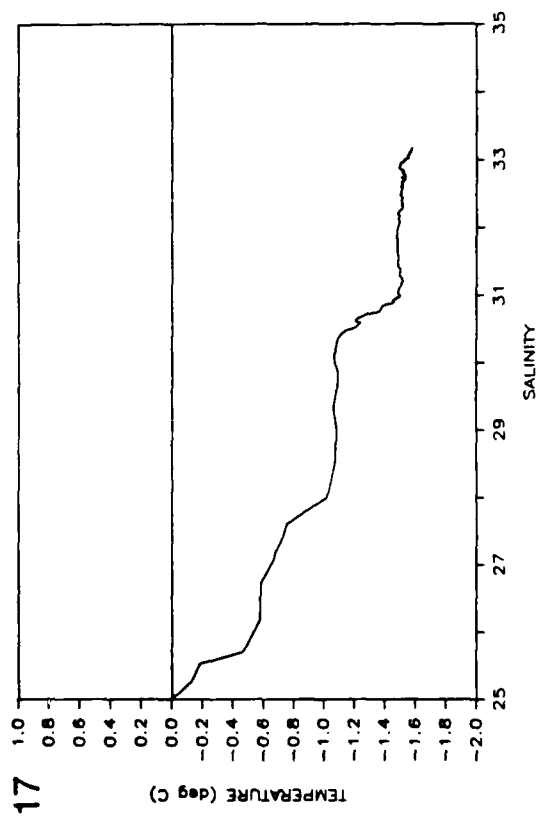
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
9	X		233	1223	Ship	70 59.8	135 19.2
10	X		233	2145	Ship	70 53.8	135 24.1
11		X	233	2230	Helo	71 13.5	134 19.0
12		X	233	2300	Helo	71 29.5	134 15.0



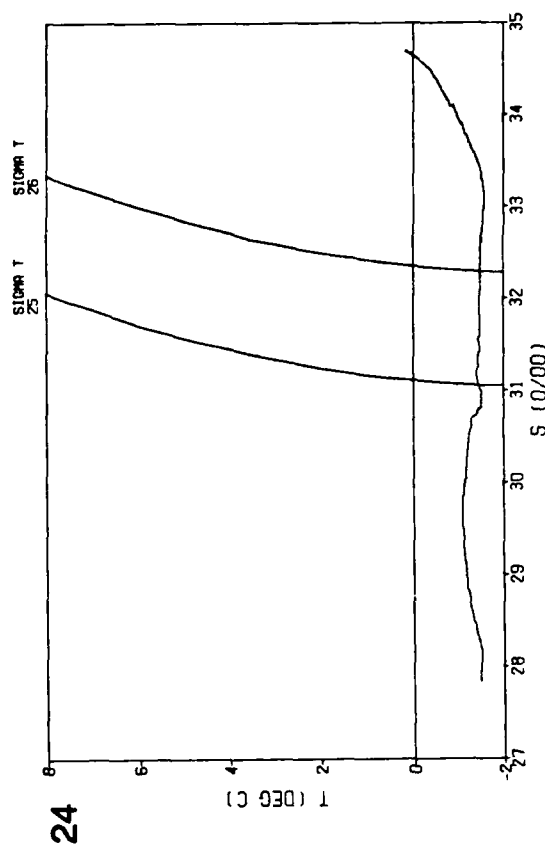
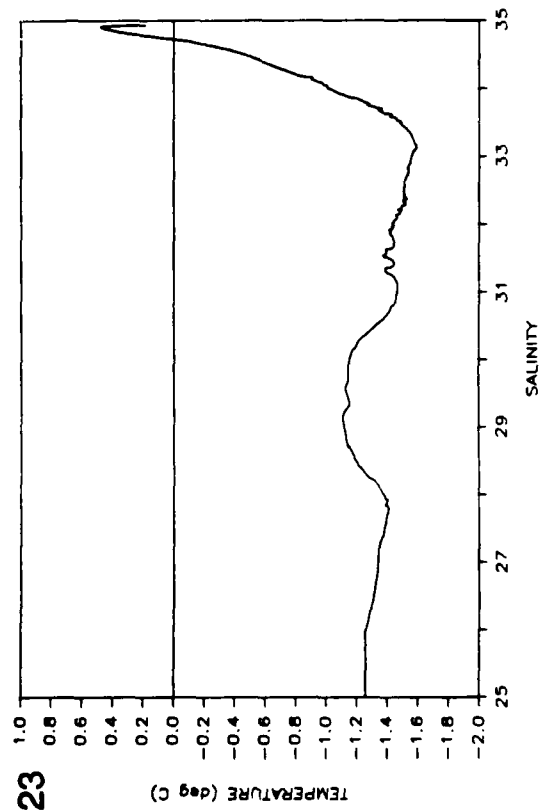
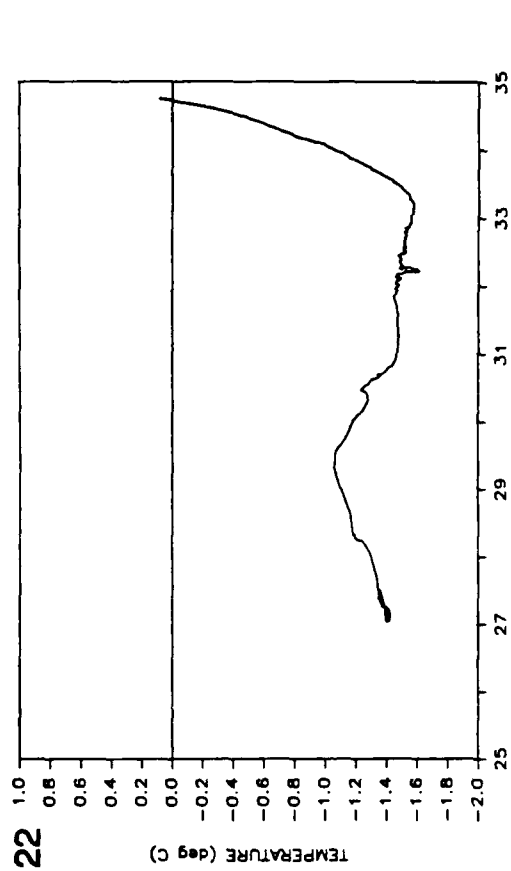
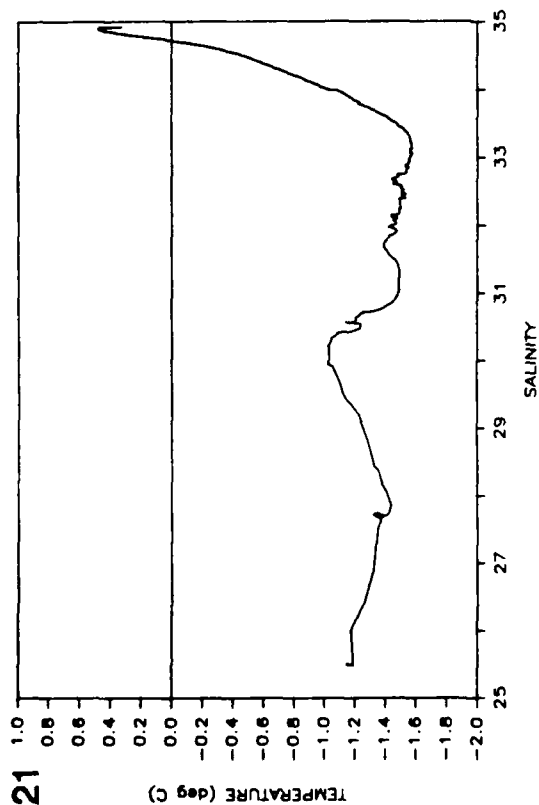
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
13	X		234	0444	Ship	70 31.1	136 16.1
14	X		234	0820	Ship	70 30.1	136 48.7
15	X		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6



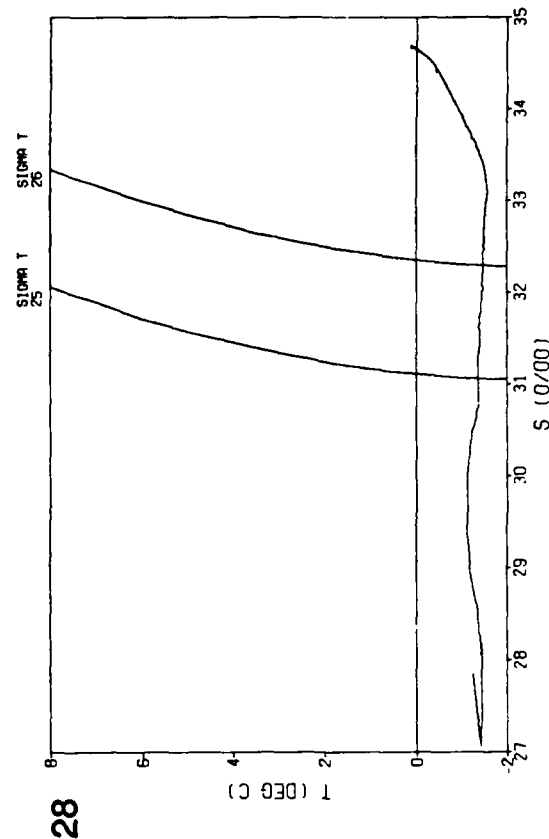
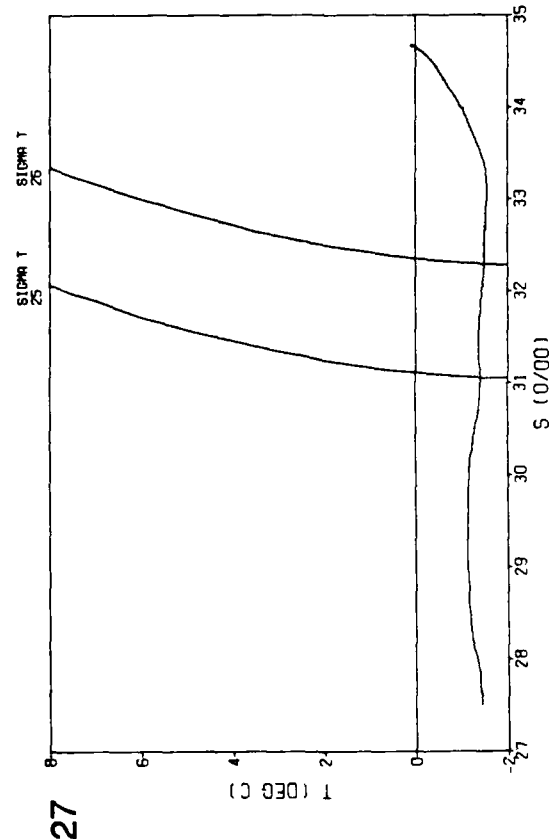
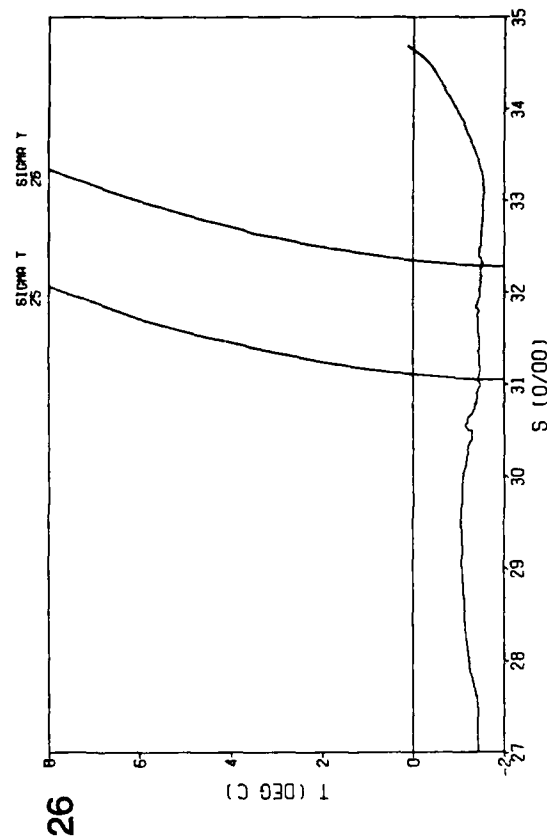
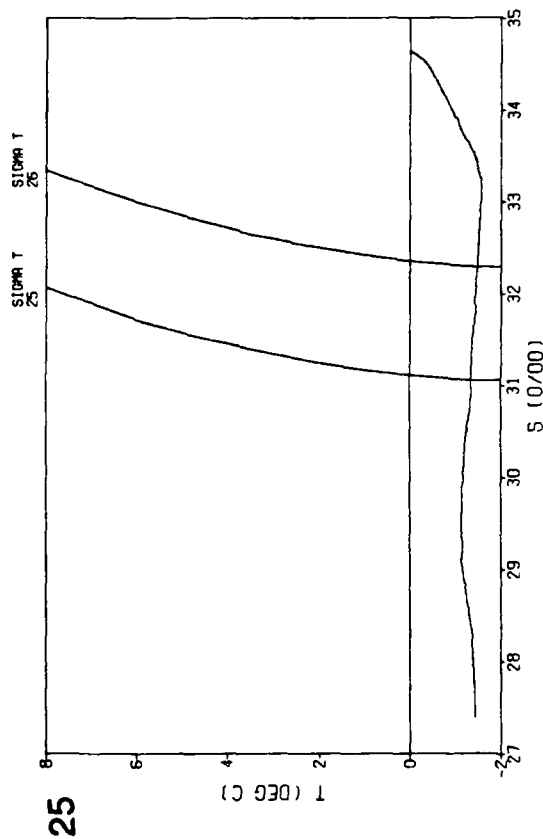
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0
19	X		235	0240	Ship	71 1.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
21	X		236	0437	Ship	71 9.0	141 24.6
22	X		236	1242	Ship	71 1.2	142 36.4
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	Helo	71 42.9	134 15.0

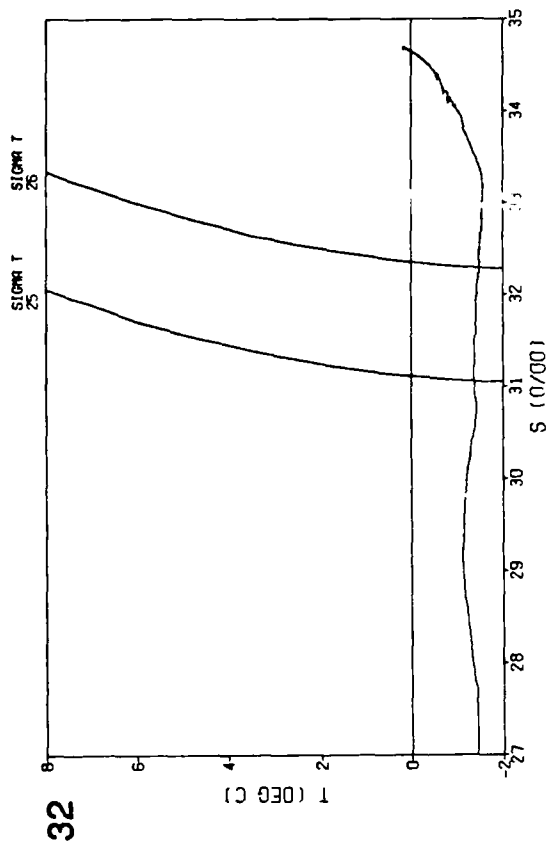
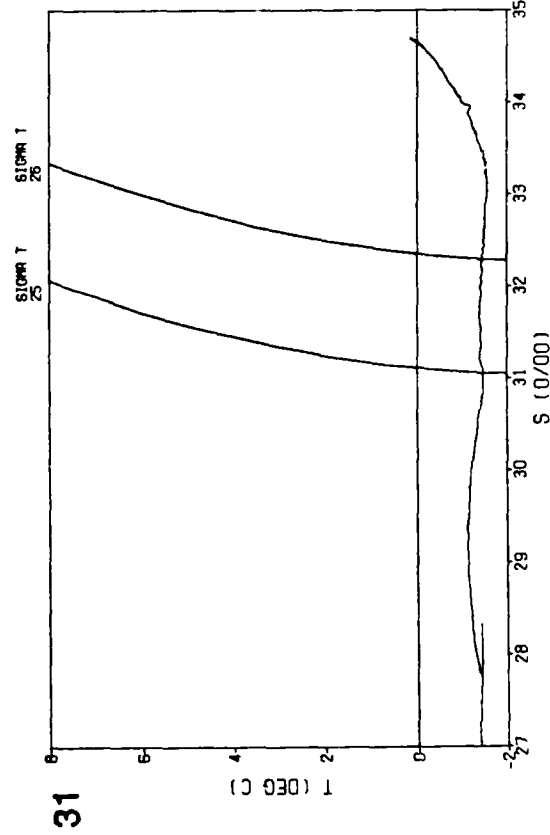
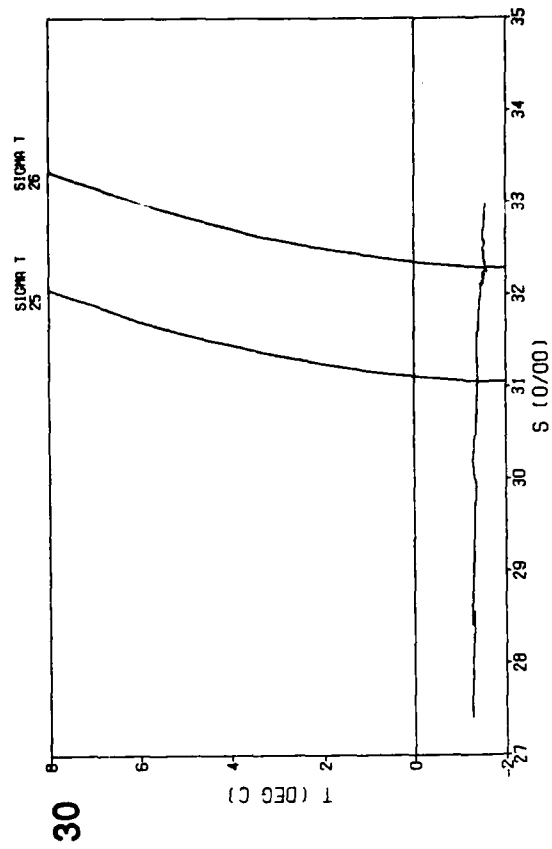
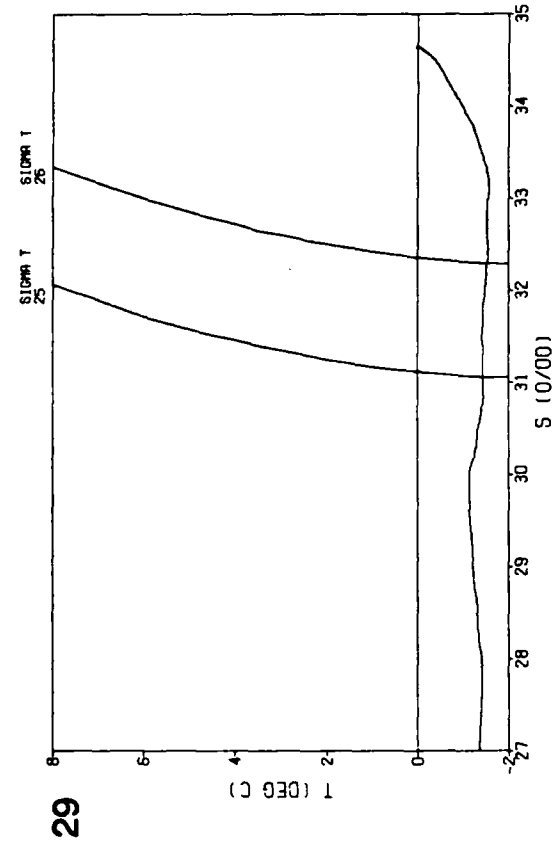


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
25		X	236	1800	Helo	71 29.5	142 58.0
26		X	236	1845	Helo	71 14.0	142 59.0
27		X	236	2257	Helo	71 10.2	143 36.0
28		X	236	2342	Helo	71 35.0	143 35.3



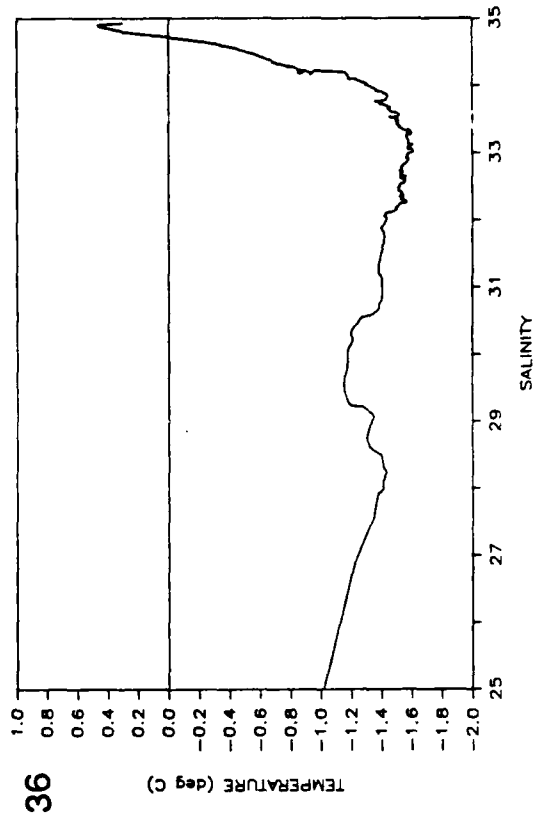
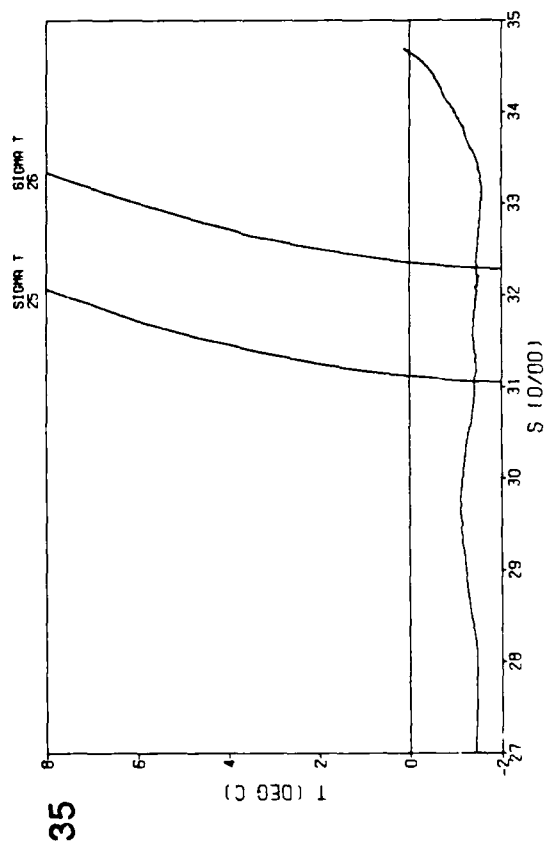
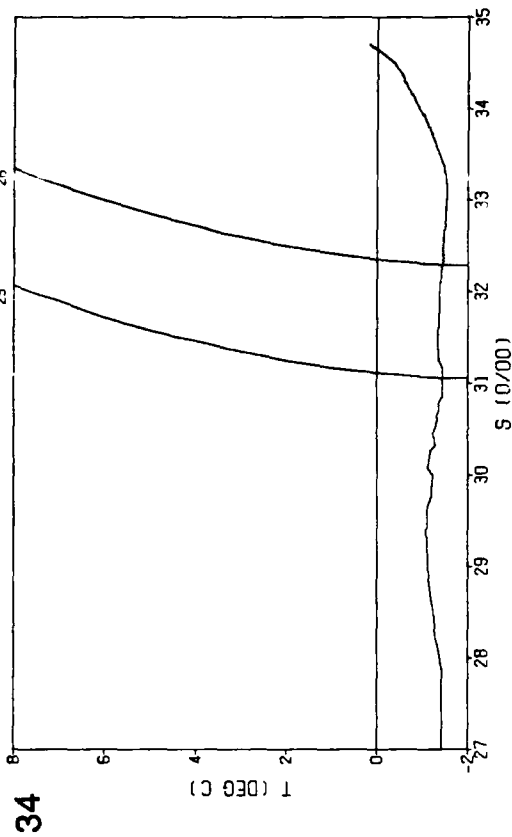
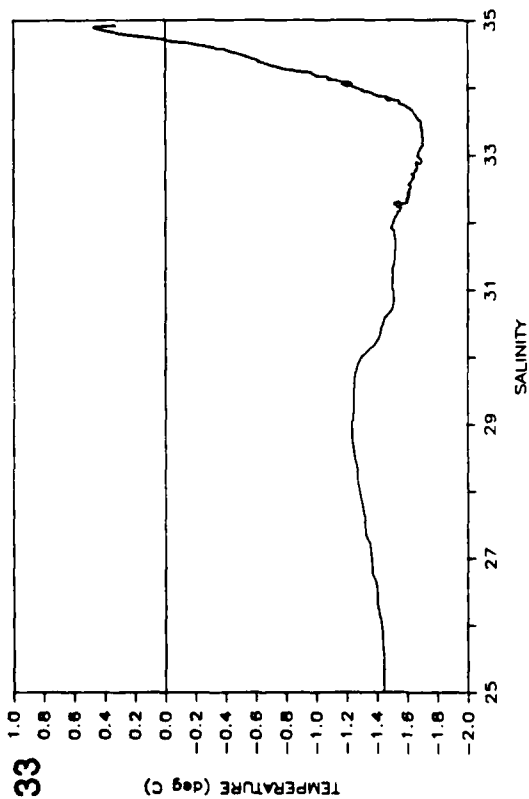
Station Number ASL Cast APL Cast Julian Day GMT h:mm Platform Latitude Longitude

29	X	X	237	0015	Helo	71 25.0	143 34.0
30	X	X	237	0613	Ship	70 44.4	144 48.8
31	X	X	237	1043	Ship	71 8.7	145 15.9
32	X	X	237	1804	Helo	71 13.3	144 45.0



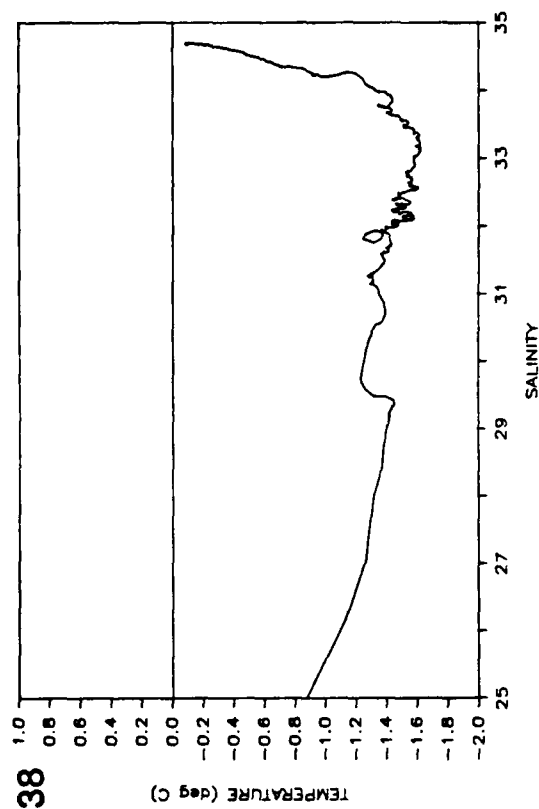
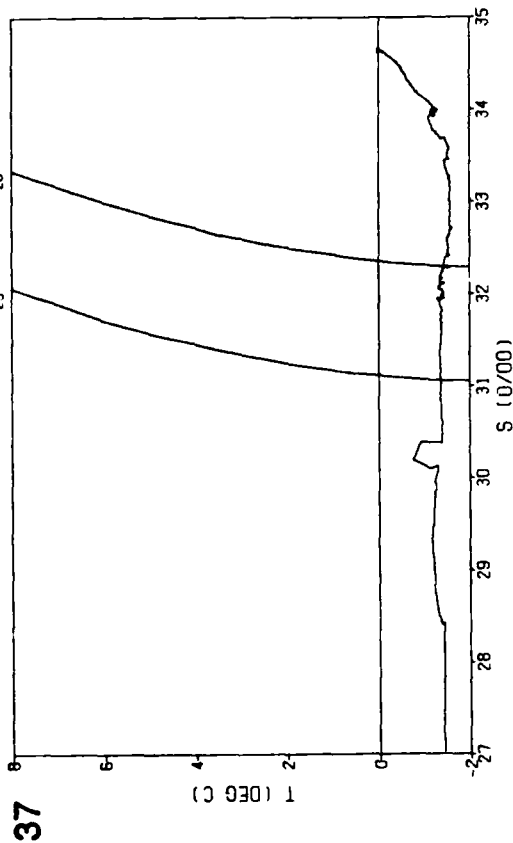
Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	Helo	71 39.2	145 52.3
35		X	237	2253	Helo	71 54.2	145 52.0
36	X		238	0425	Ship	71 8.1	146 29.8



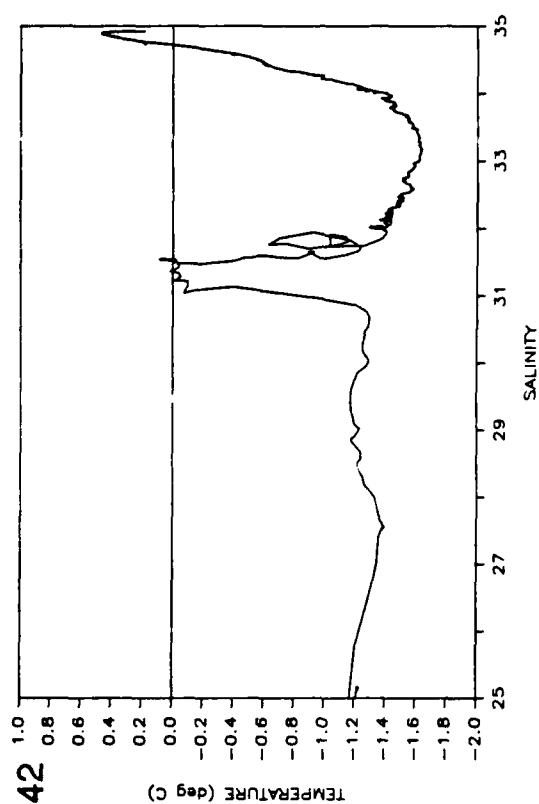
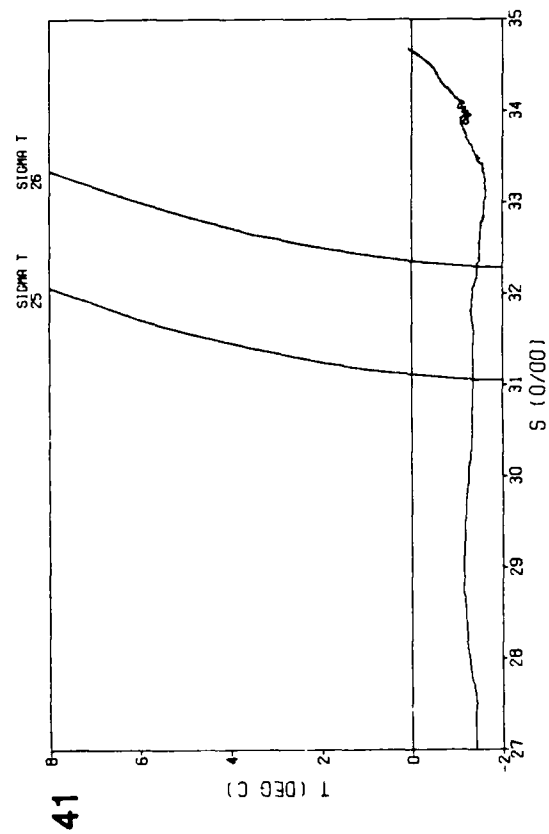
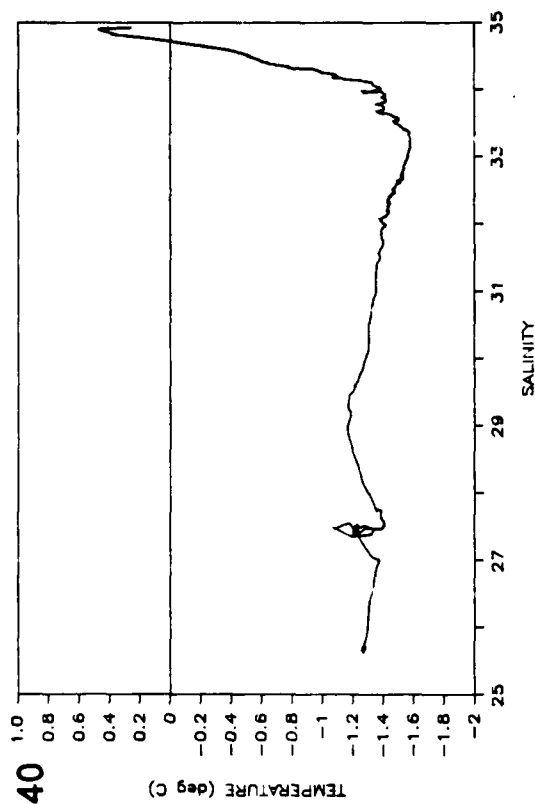
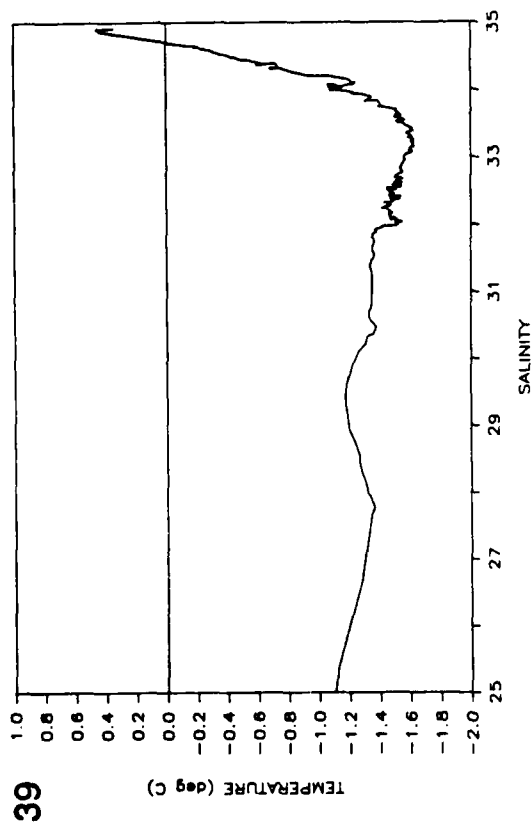
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
37		X	240	0014
38	X		240	0509

Platform	Latitude	Longitude
Helo	71 22.4	148 11.0
Ship	71 15.5	149 6.7

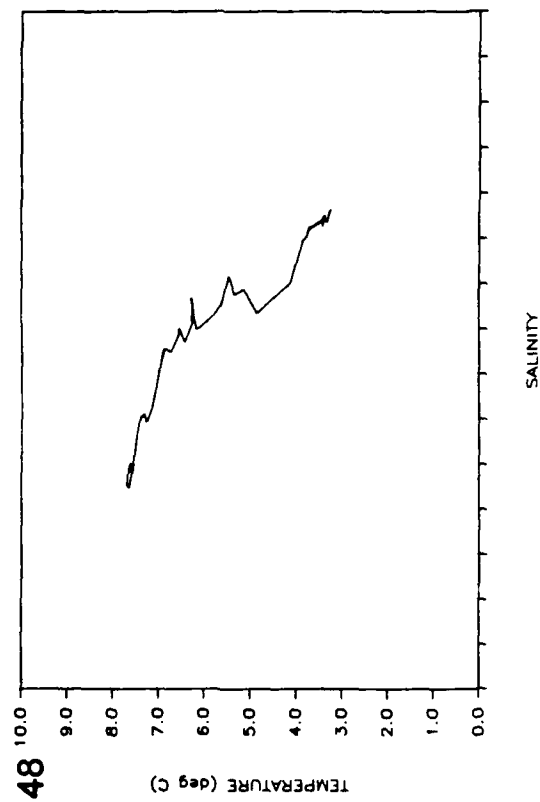
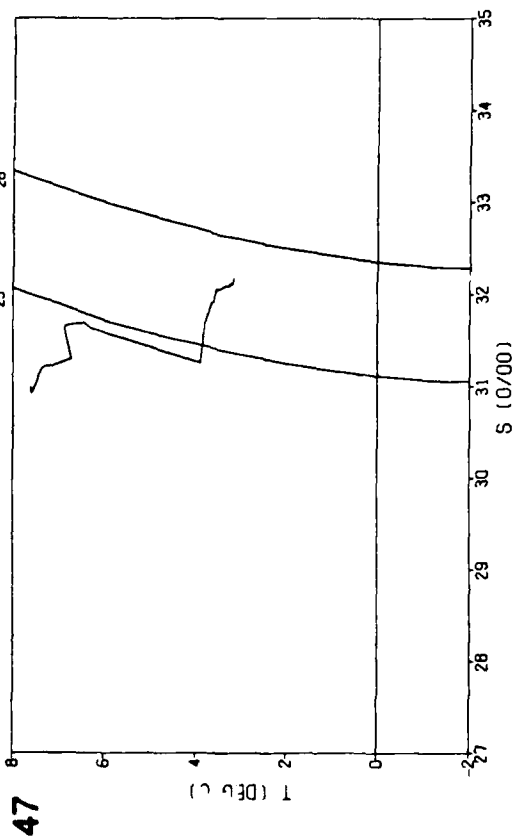


Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

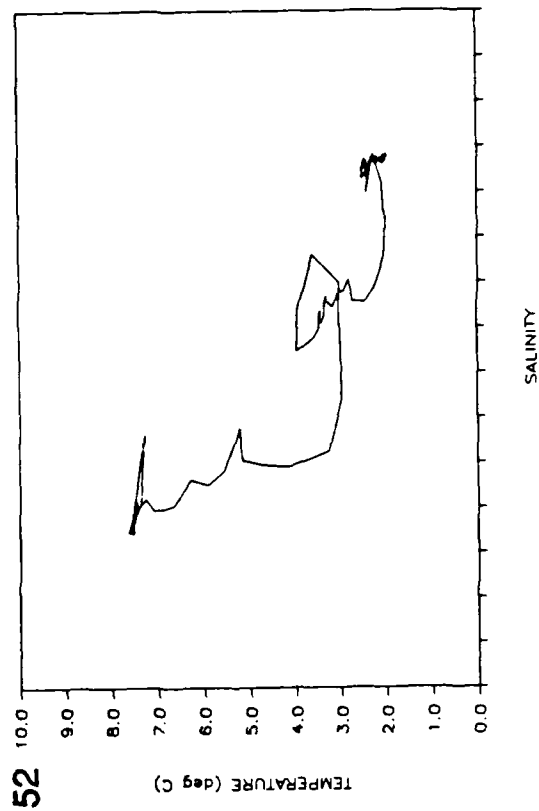
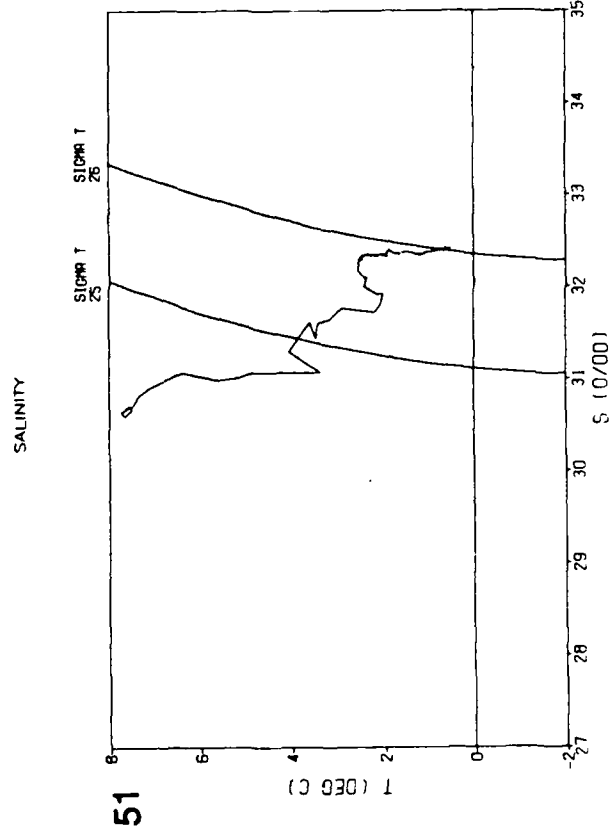
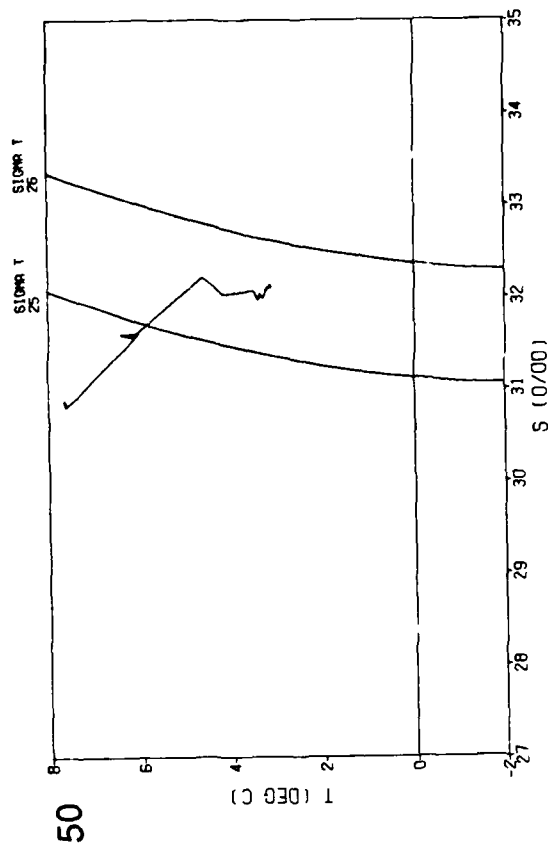
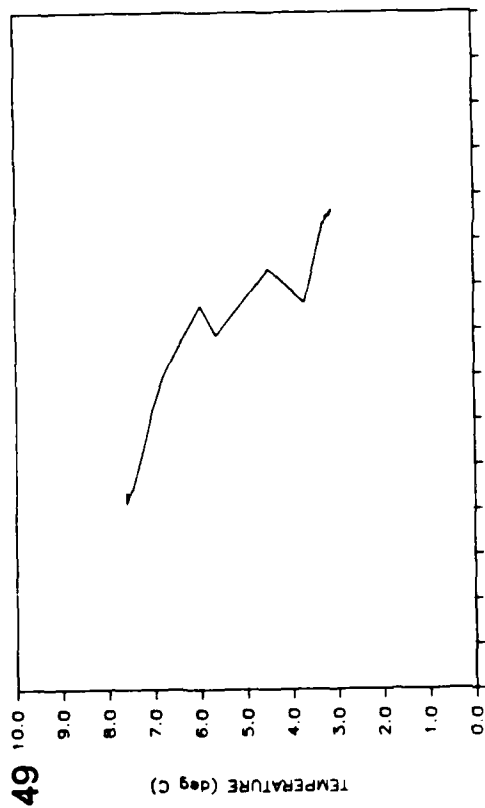
39	X		240	1001	Ship	71 18.6	149 56.1
40	X	X	240	1803	Ship	71 42.9	150 2.4
41			240	1816	Helicopter	71 42.9	149 16.5
42	X		241	0144	Ship	71 57.9	149 58.5



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
47			245	0524	Ship	70 50.7	160 34.9
48	X	X					

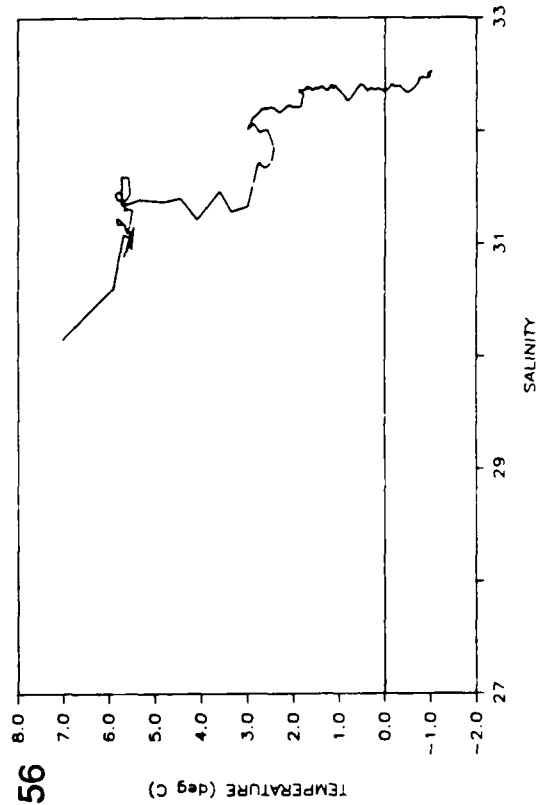
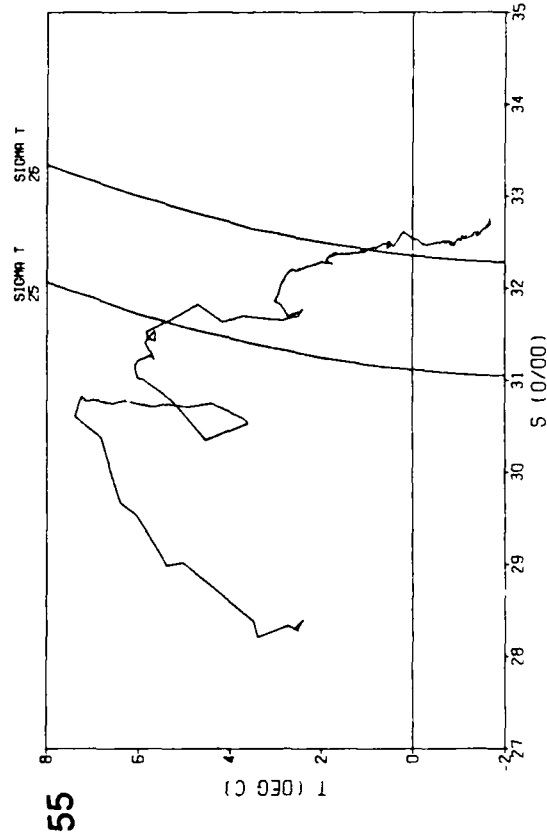
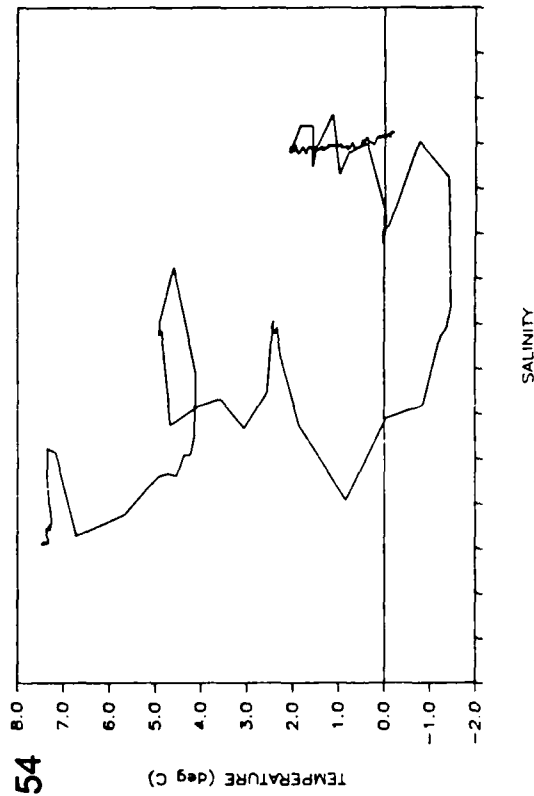
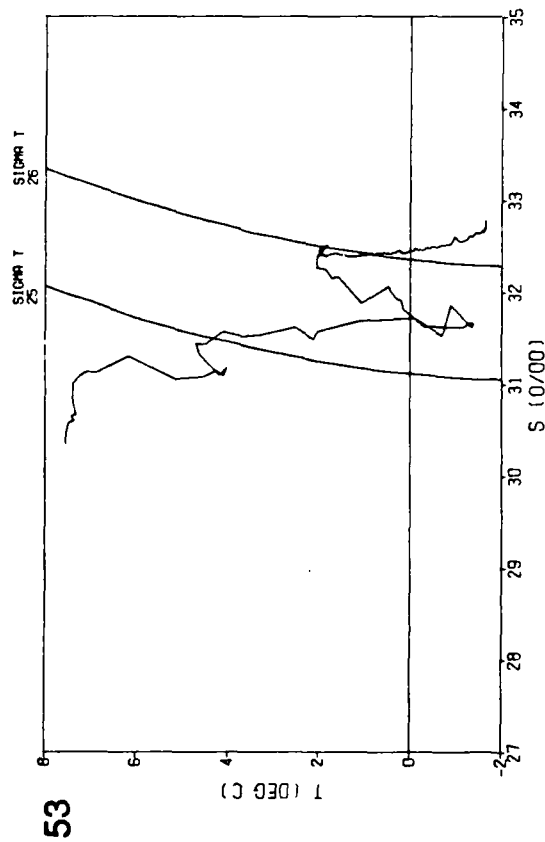


Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
49	X		245	0626	Ship	70 55.8	160 10.8
50		X	245	0819	Ship	71 2.2	159 39.1

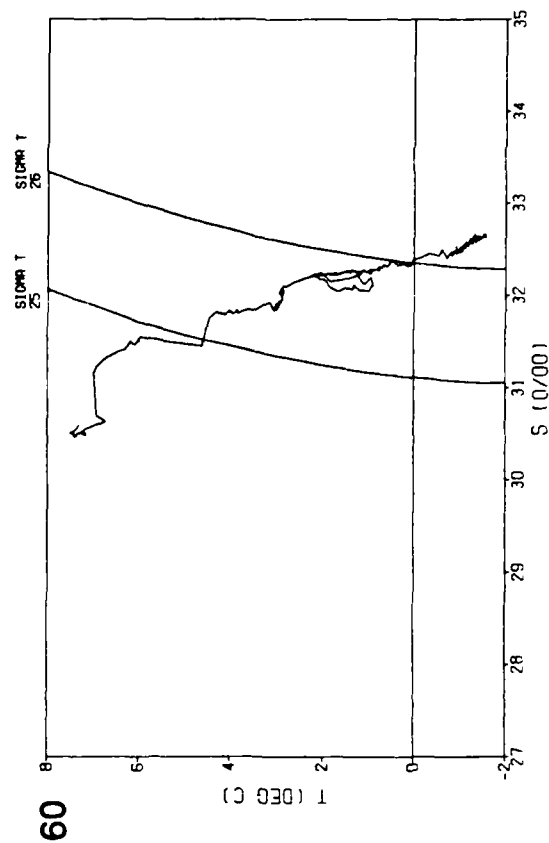
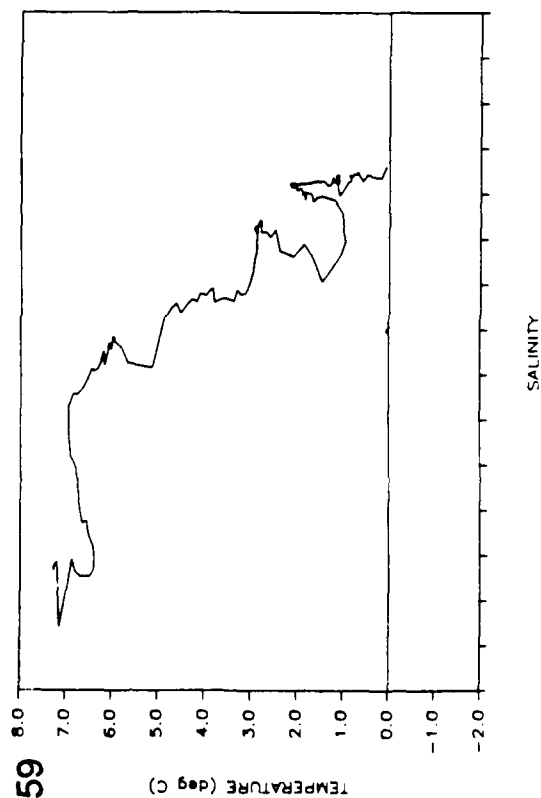
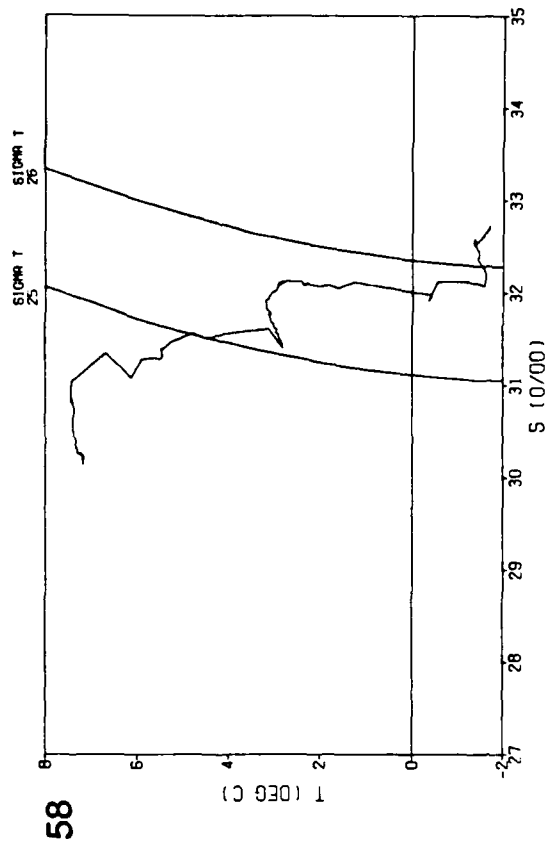
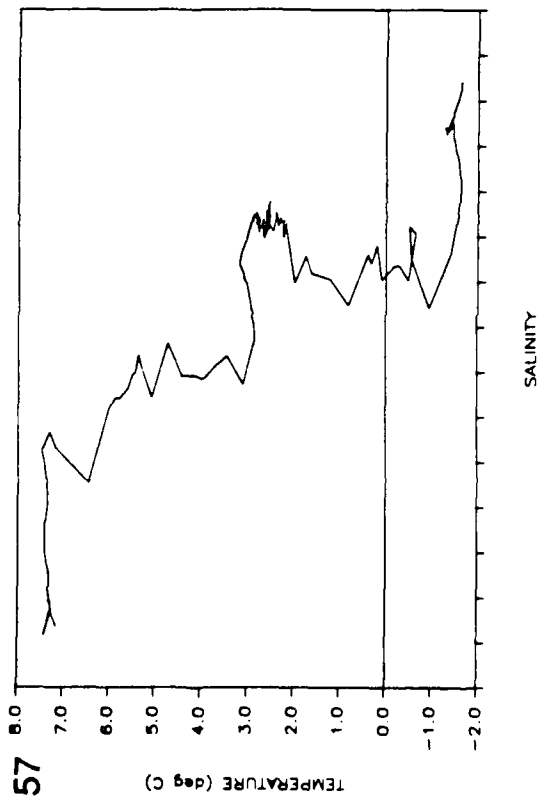


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
53		X	245	0922
54	X			
55		X	245	1033
56	X			

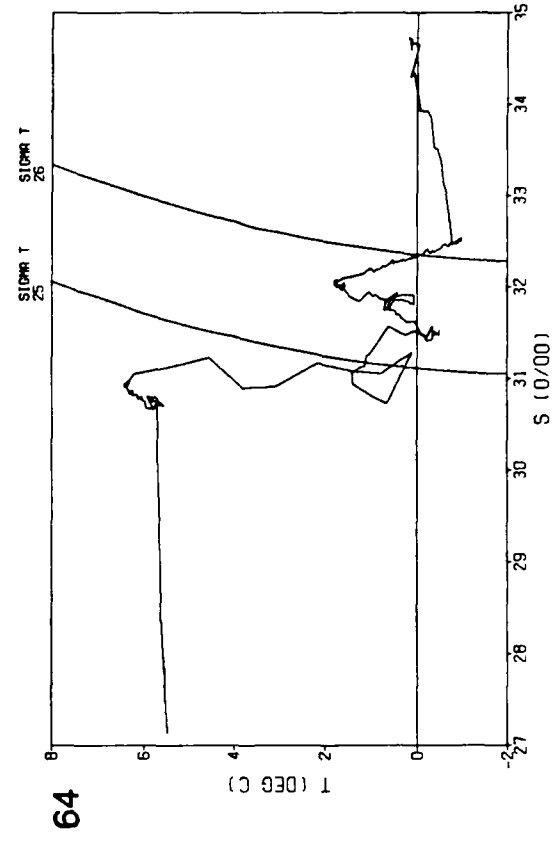
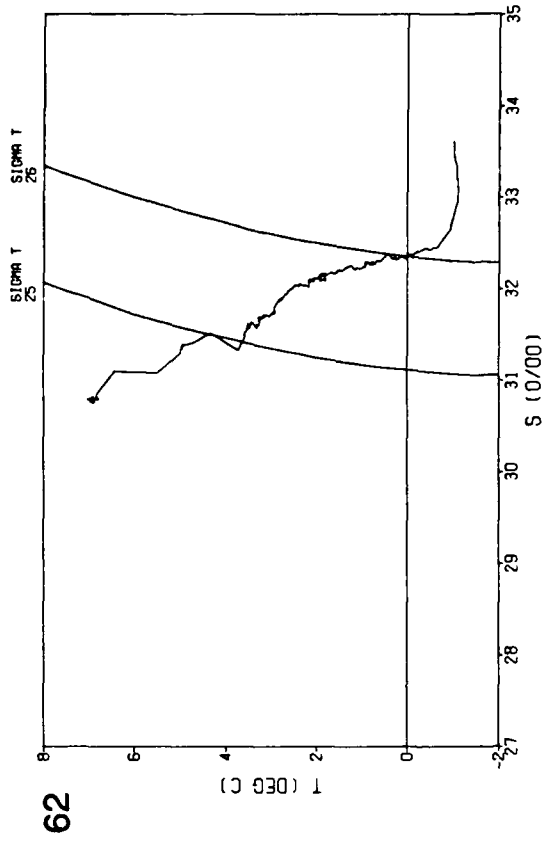
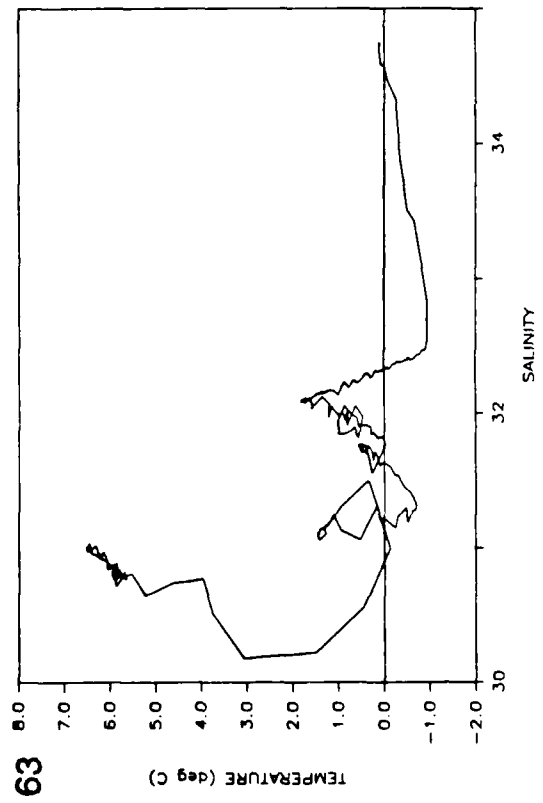
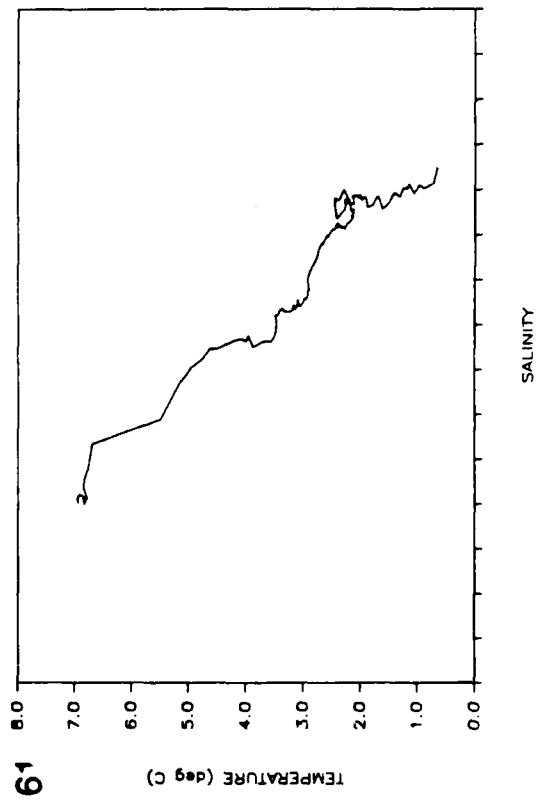
Platform	Latitude	Longitude
Ship	71 7.0	159 19.4
Ship	71 11.8	158 52.6



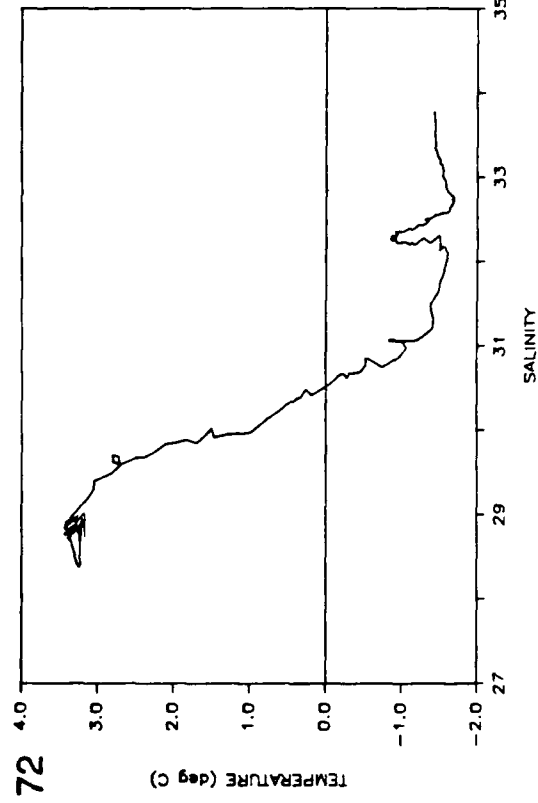
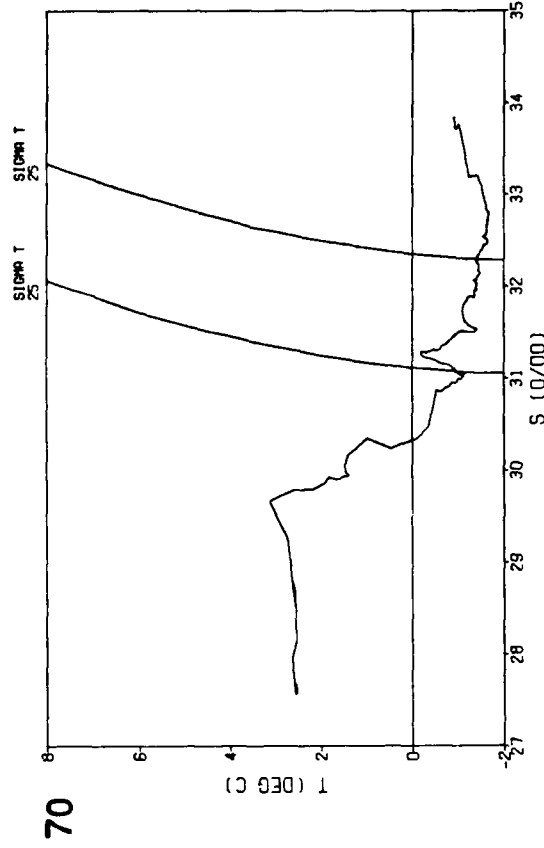
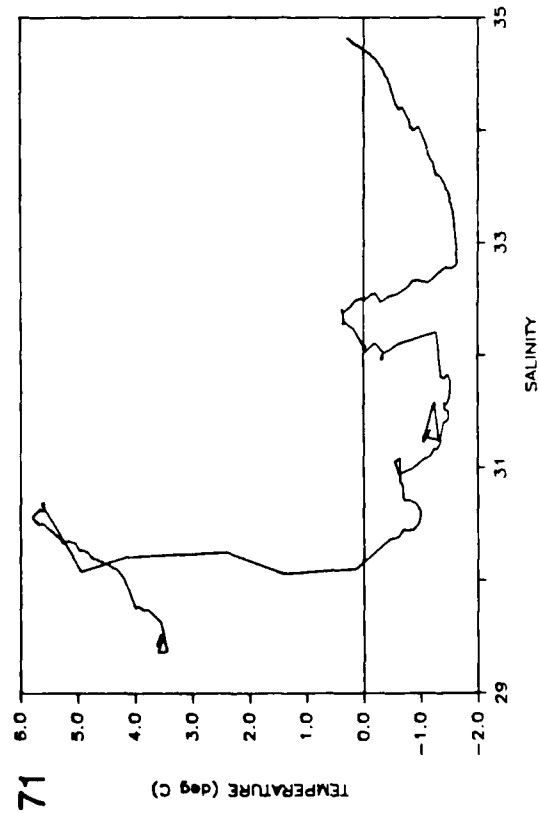
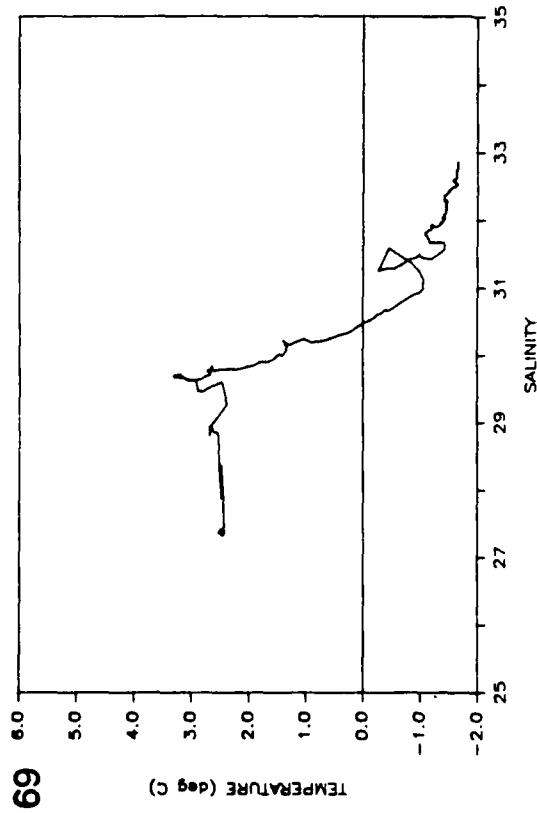
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
57	X		245	1135	Ship	71 16.9	158 28.2
58	X		245	1300	Ship	71 21.4	157 55.2



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
61	X		245	1409	Ship	71 24.9	157 31.9
62		X					
63	X		245	1530	Ship	71 28.7	157 5.3
64		X					

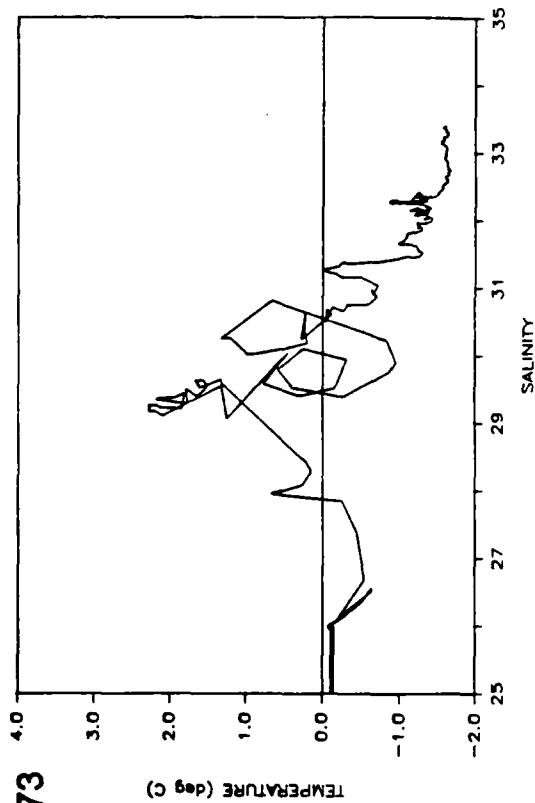


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
69	X		245	2000	Ship	71 41.3	155 35.9
70		X					
71	X		245	2121	Ship	71 44.4	155 8.5
72	X		245	2351	Ship	71 55.6	155 1.3

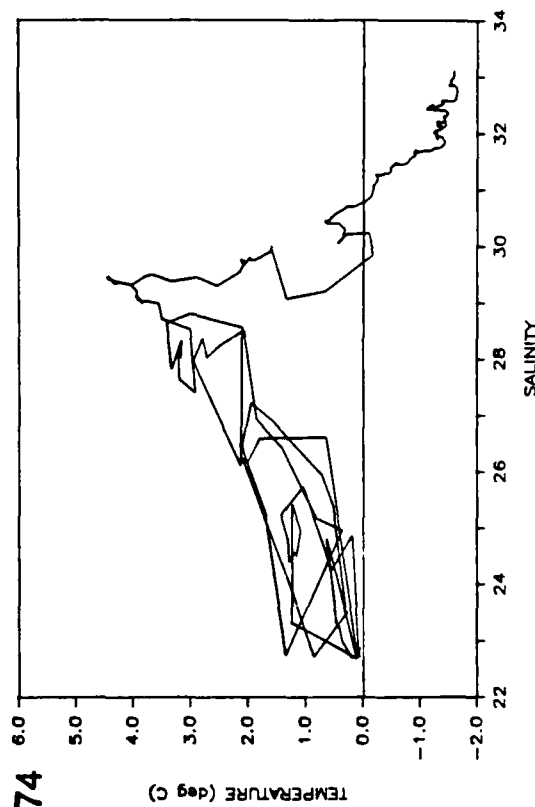


Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
73	X		246	0109	Ship	72 3.9	154 53.9
74	X		246	0254	Ship	72 13.5	154 48.1

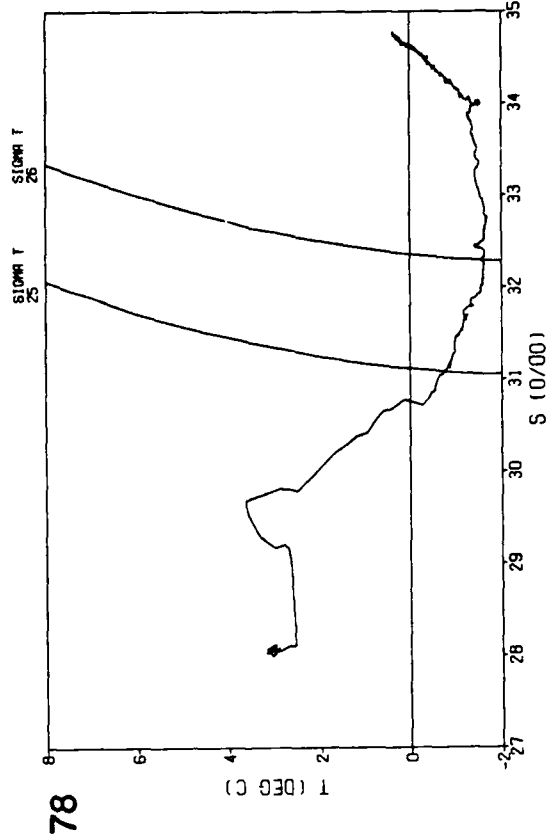
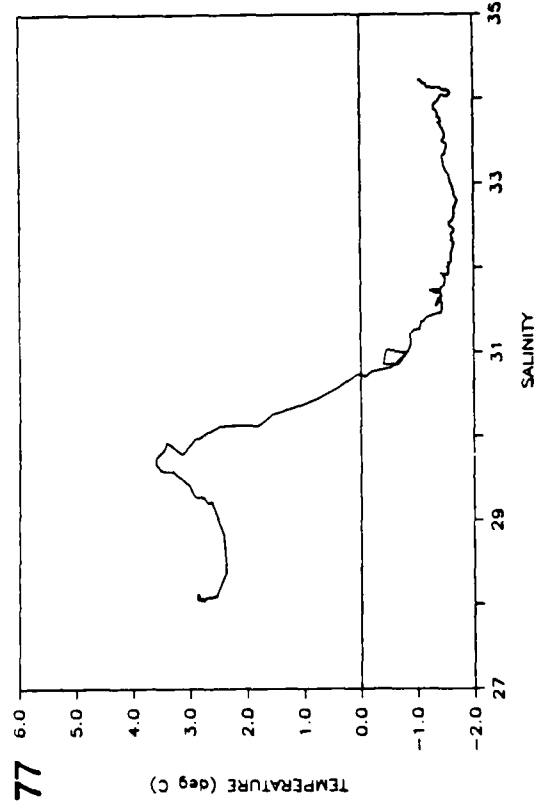
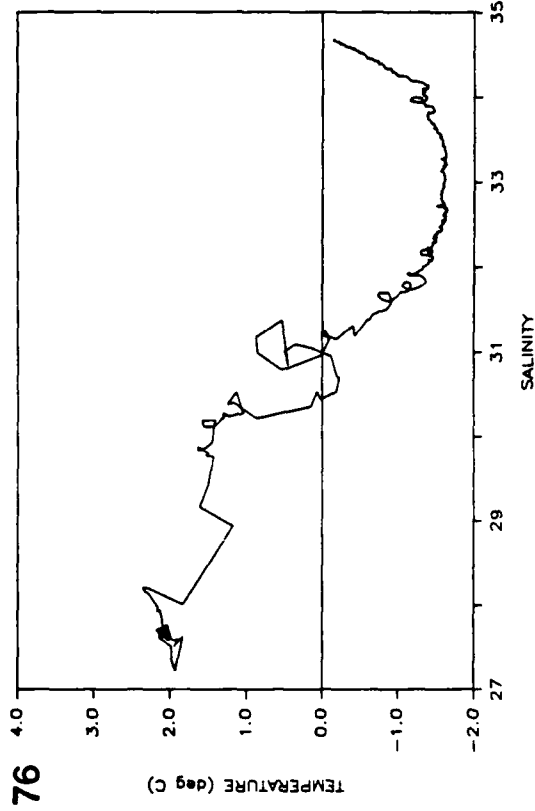
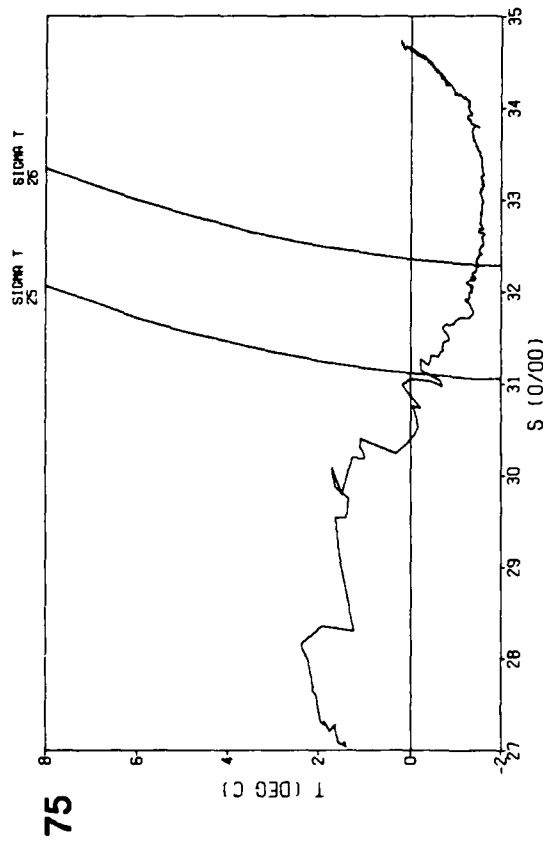
73



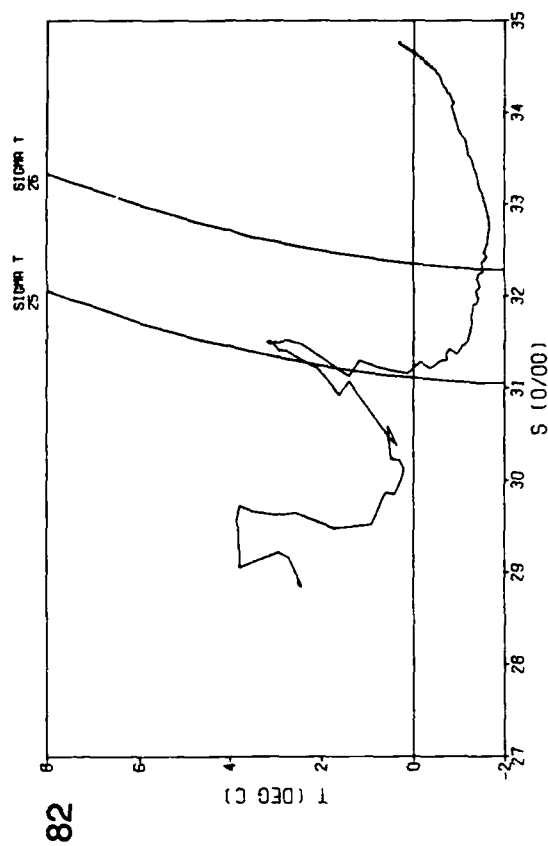
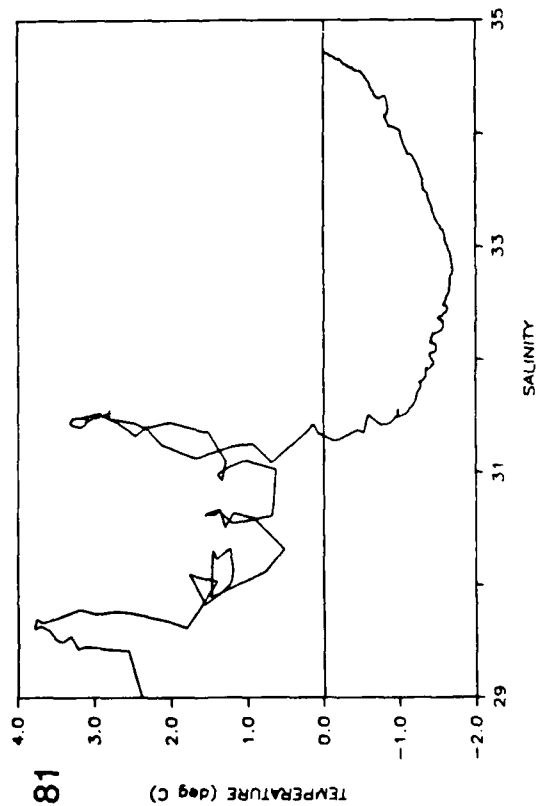
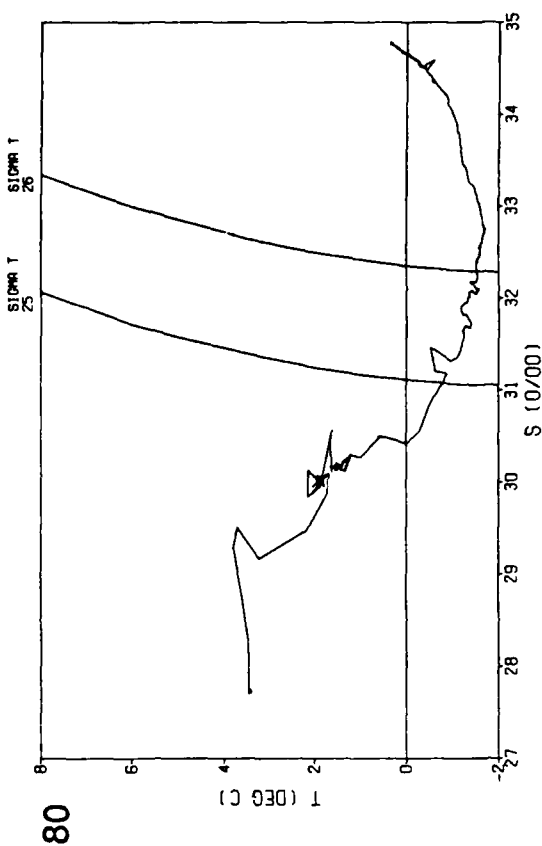
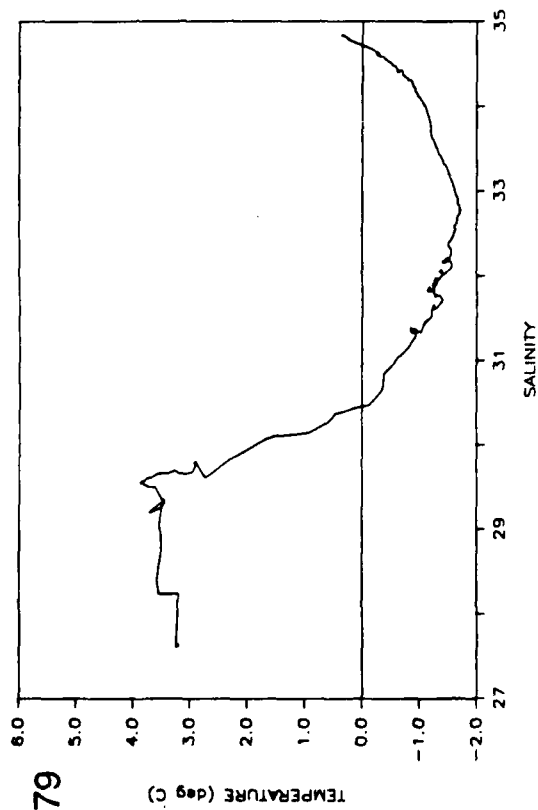
74



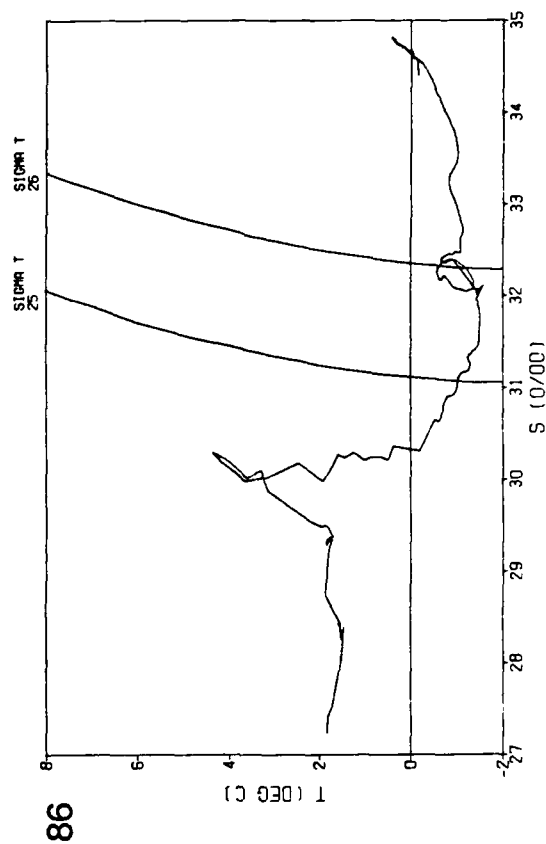
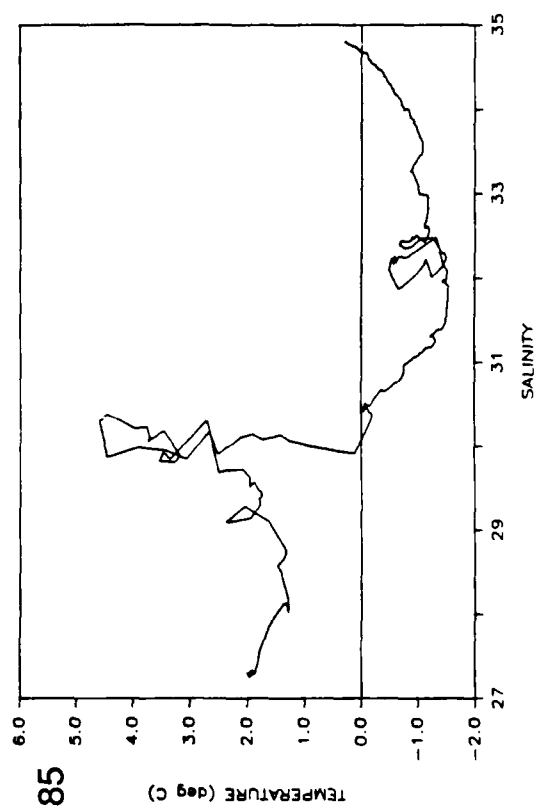
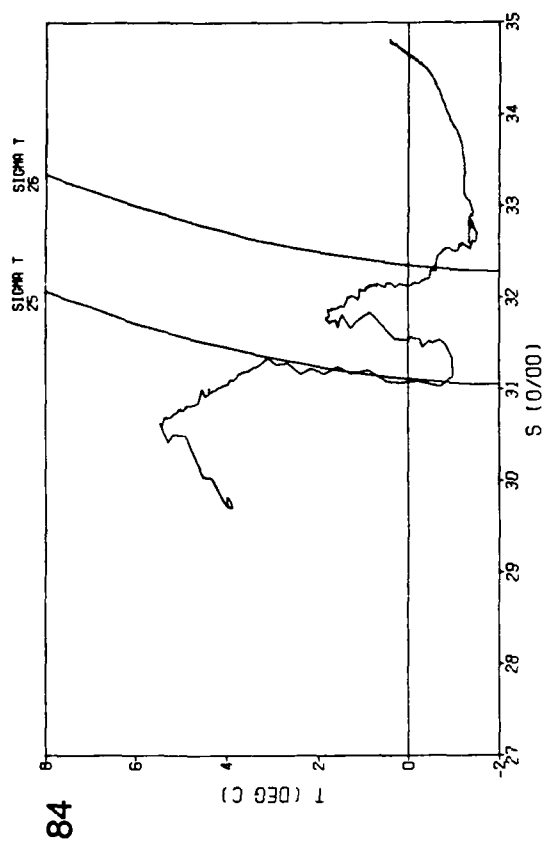
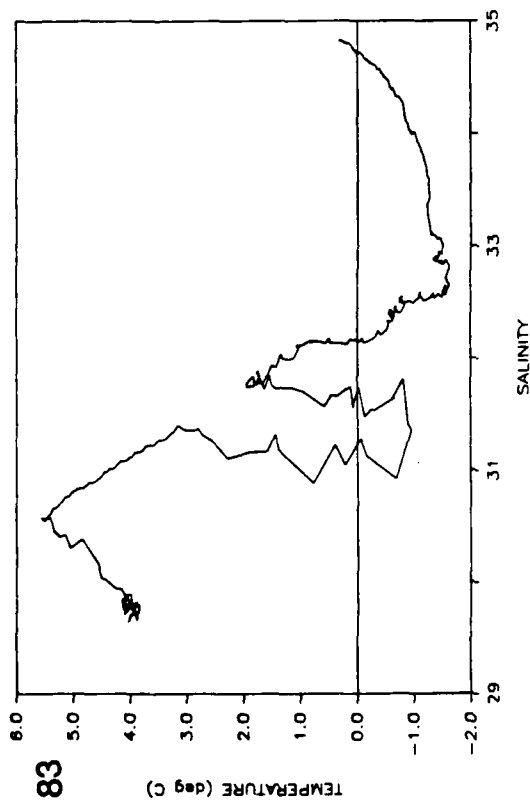
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
75		X	246	0531	Ship	72 4.1	155 36.6
76	X		246	0650	Ship	72 1.9	155 29.6
77	X						
78		X					



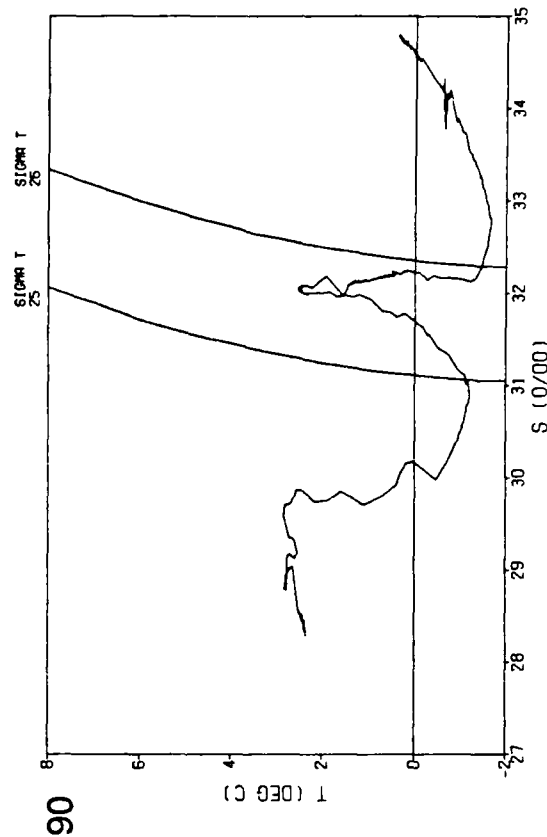
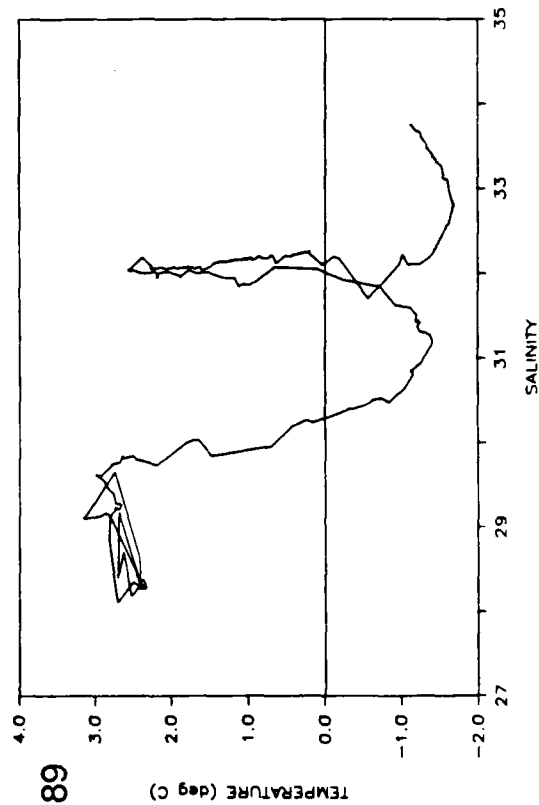
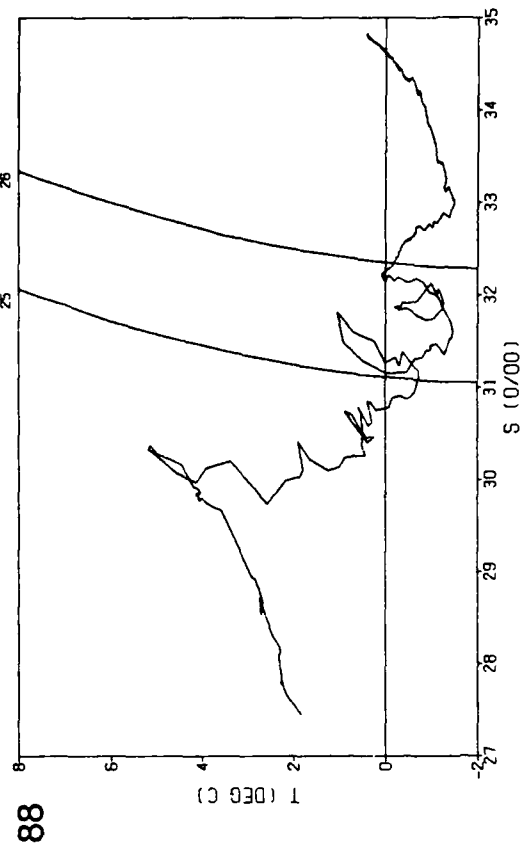
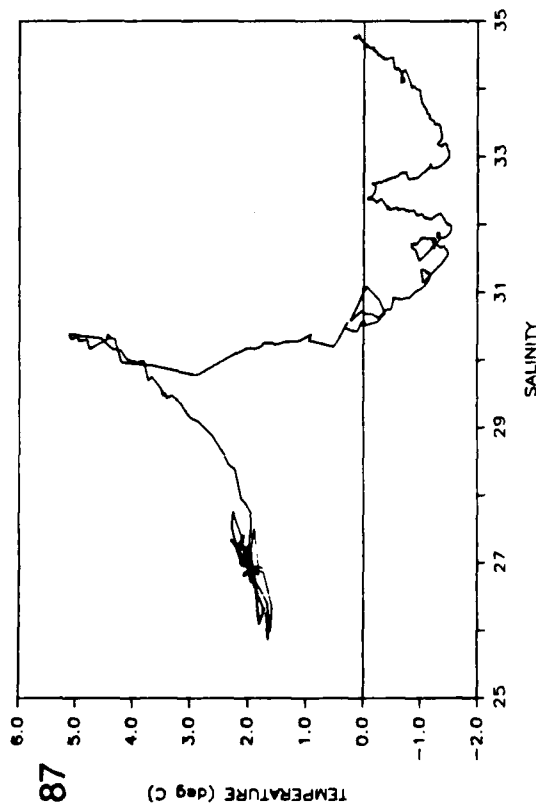
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
79	X		246	0813	Ship	71 58.1	155 26.6
80	X	X	246	0920	Ship	71 56.7	155 23.4



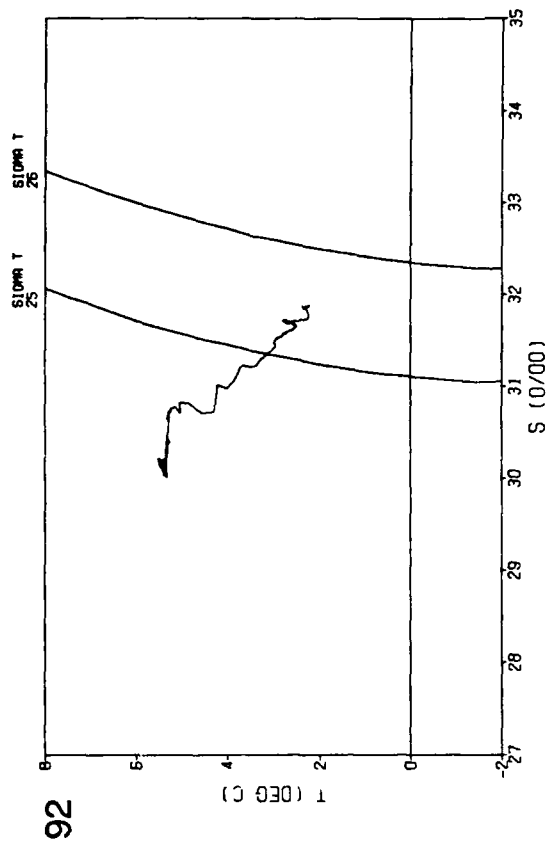
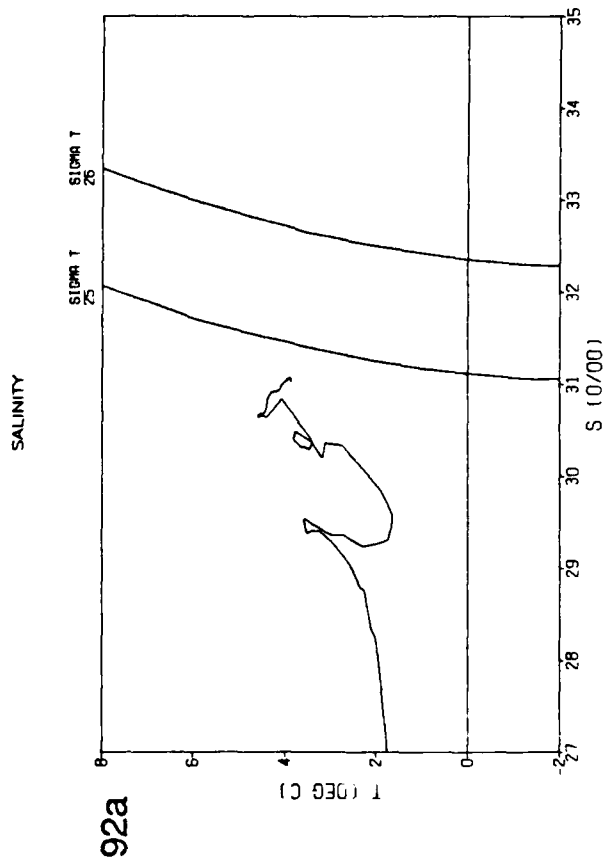
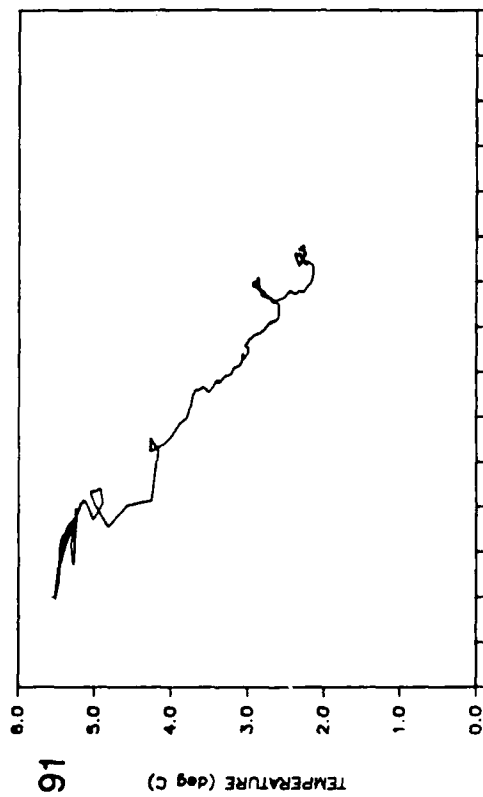
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
83	X		246	1044	Ship	71 53.5	155 18.8
84	X	X	246	1150	Ship	71 50.3	155 14.7



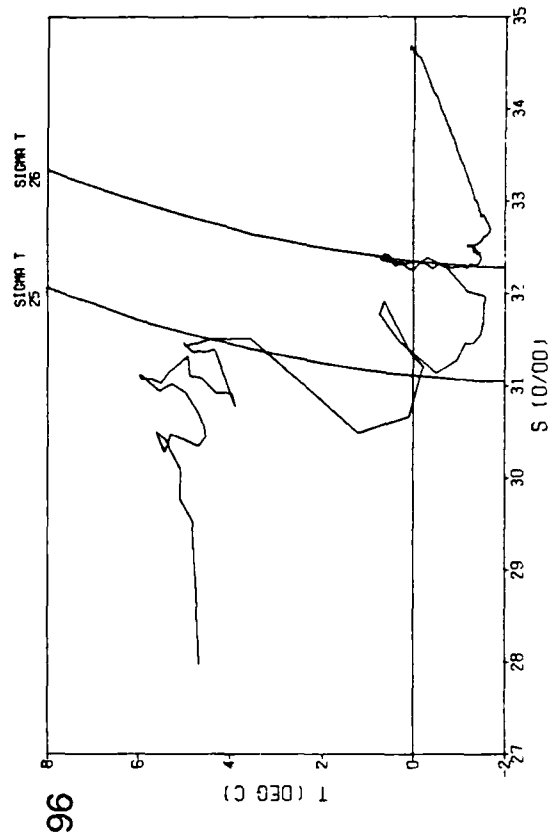
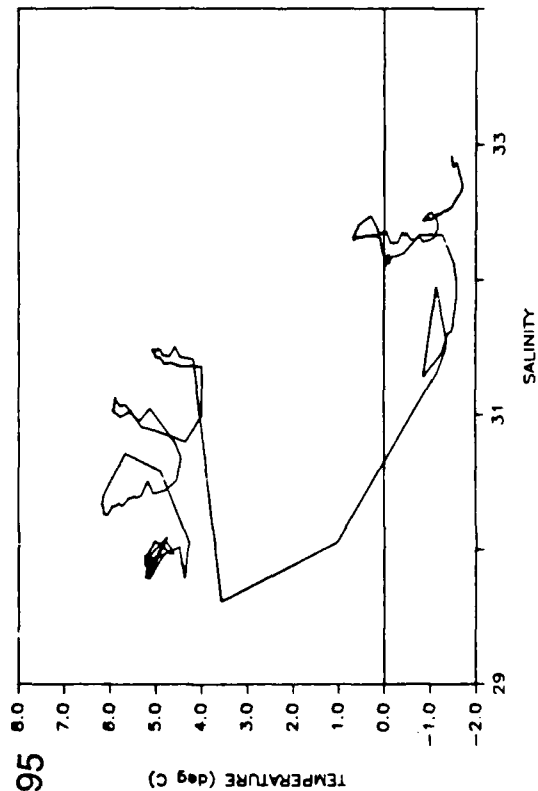
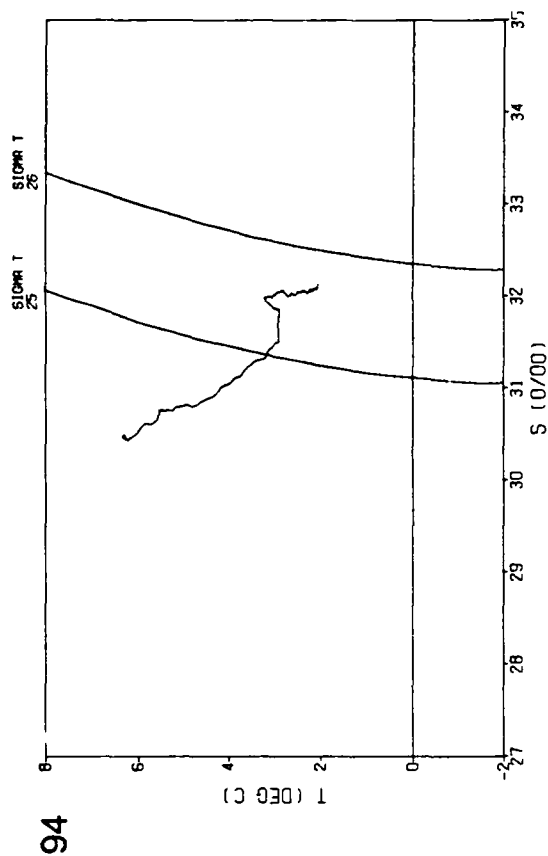
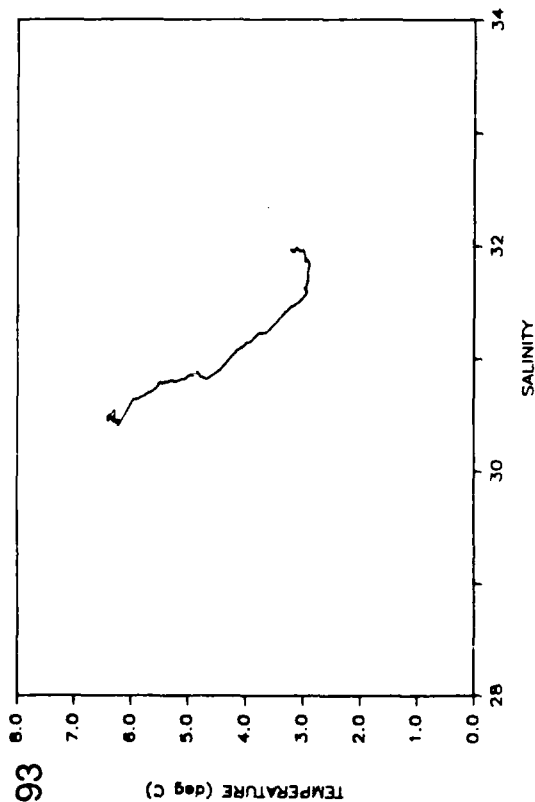
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
87	X		246	1251	Ship	71 47.6	155 11.1
88	X	X	246	1400	Ship	71 45.4	155 4.9



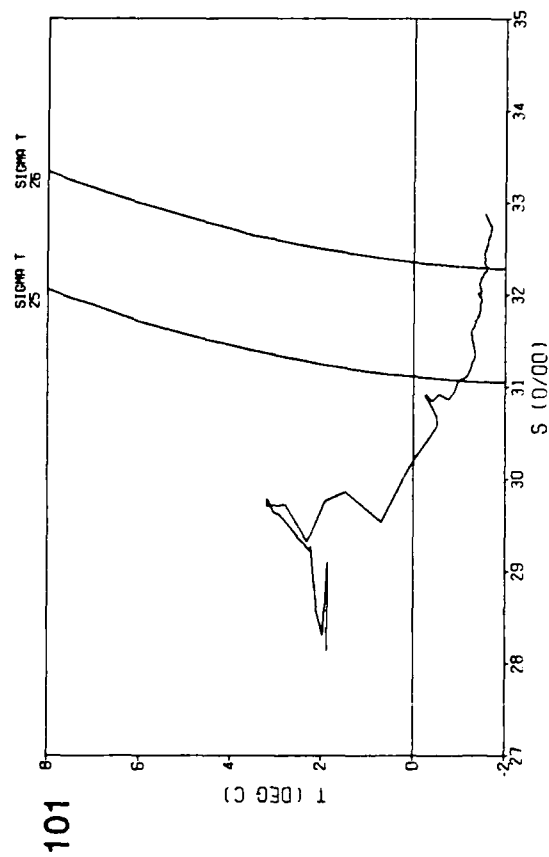
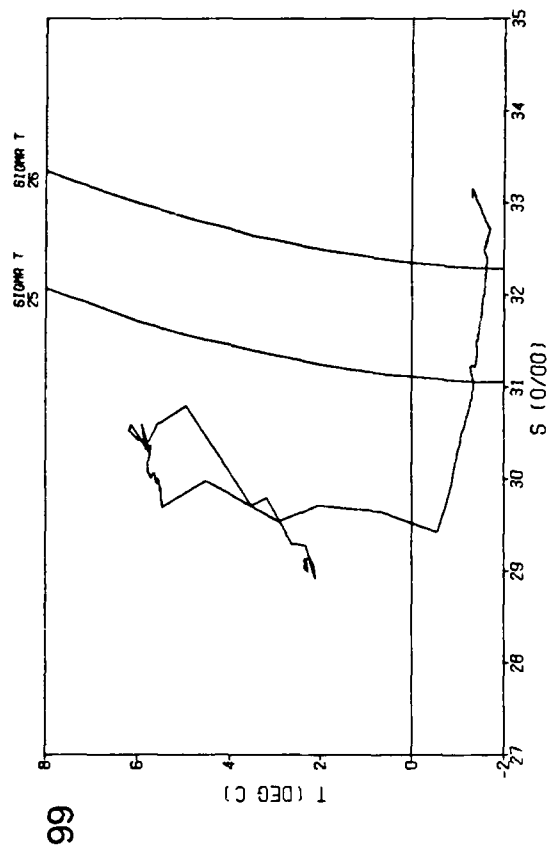
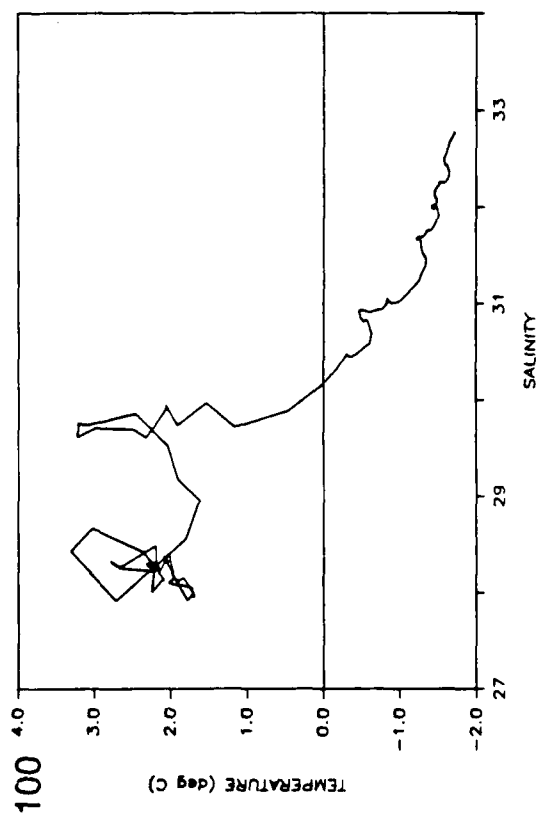
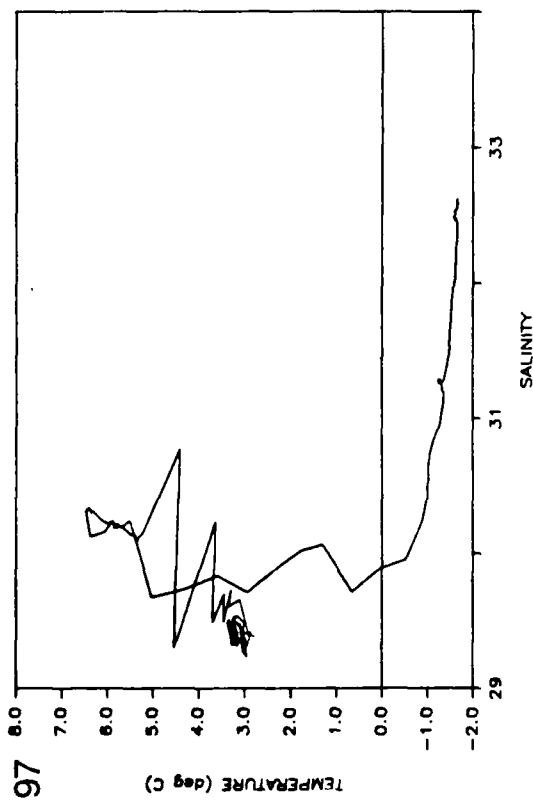
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
91	X		246	1502	Ship	71 41.8	155 3.8
92		X	246	1640	Ship	71 33.7	154 49.3



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
93	X		247	0048	Ship	71 25.3	156 47.0
94	X	X	247	0202	Ship	71 31.8	156 55.2

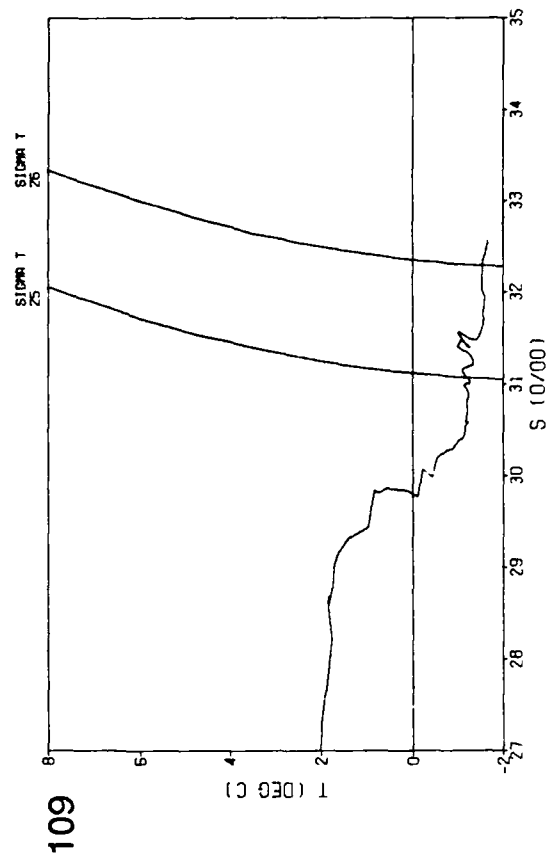
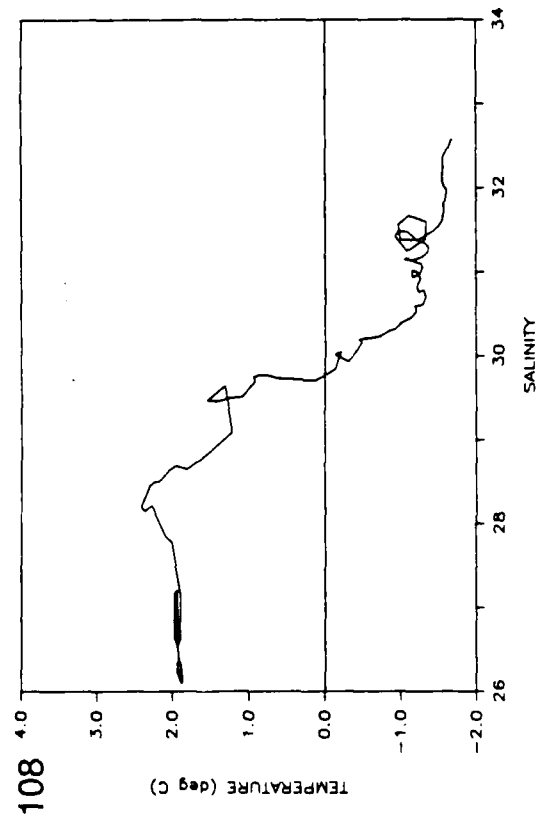
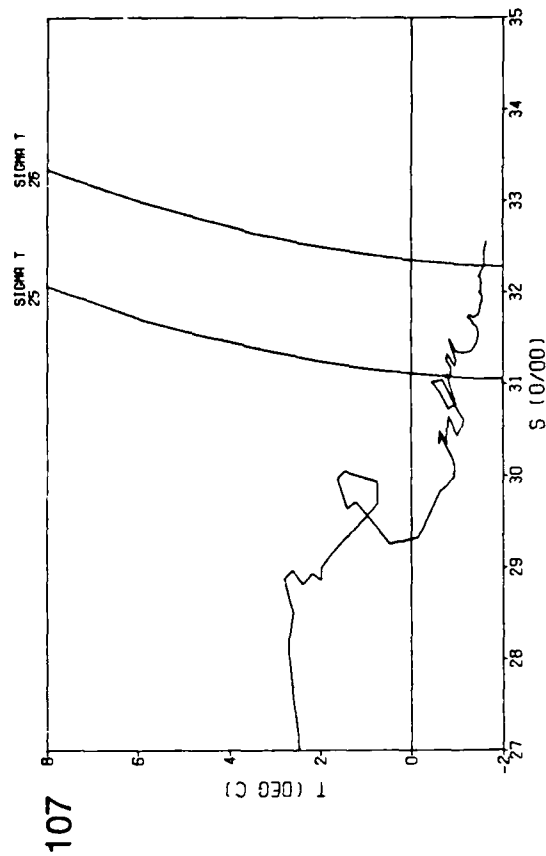
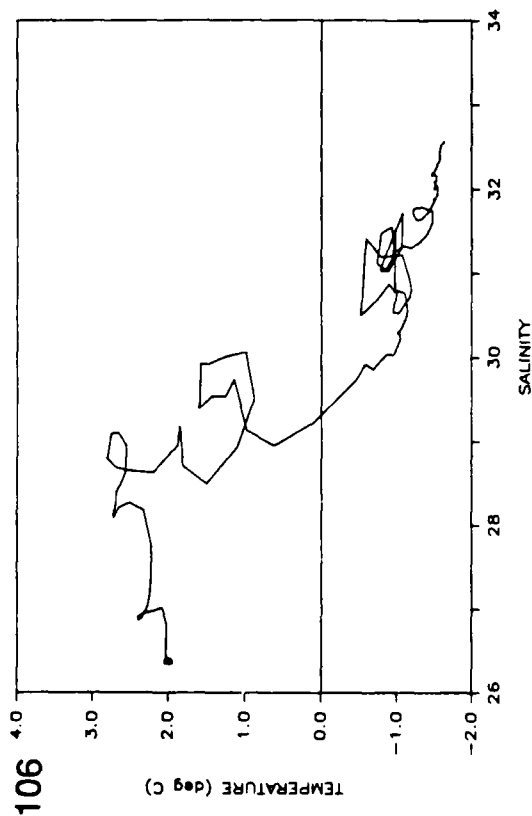


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
97	X		247	0258	Ship	71 34.4	156 58.4
99	X	X	247	0344	Ship	71 37.7	157 3.3



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm
106	X		247	0554
107		X		
108	X		247	0636
109		X		

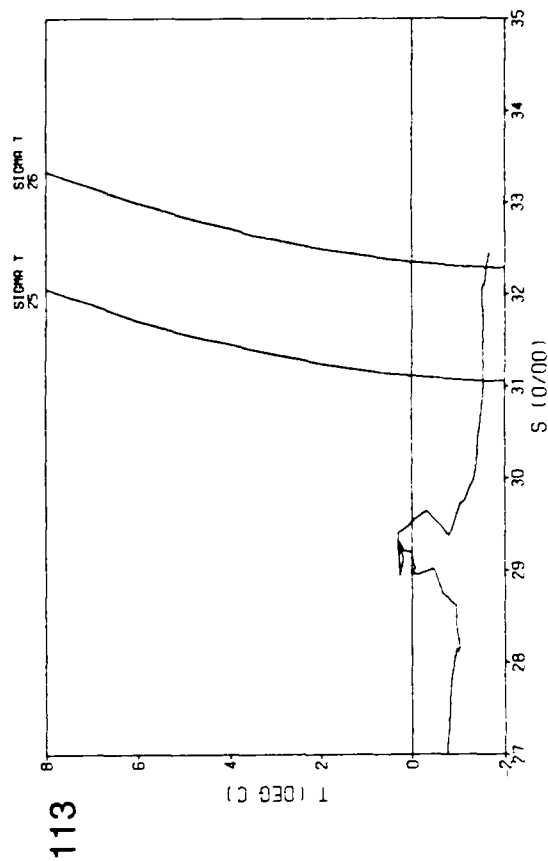
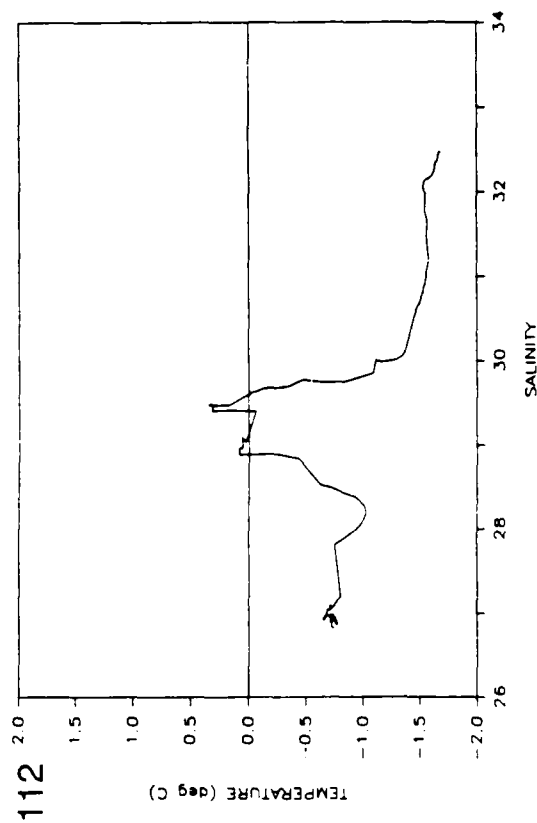
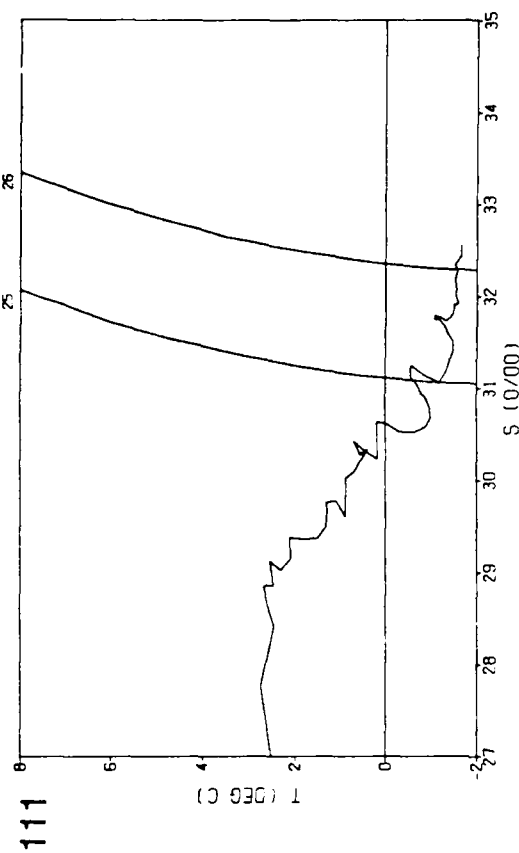
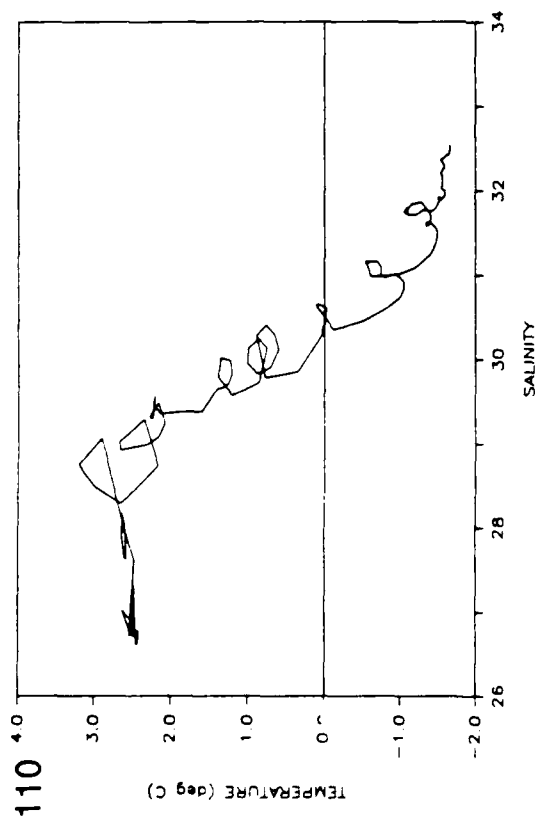
Platform	Latitude	Longitude
Ship	71 45.9	157 12.4
Ship	71 48.9	157 16.4



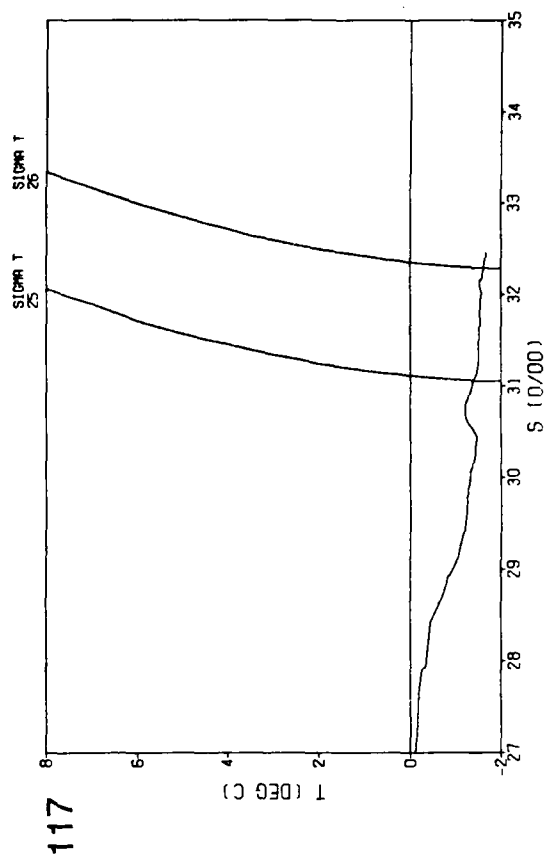
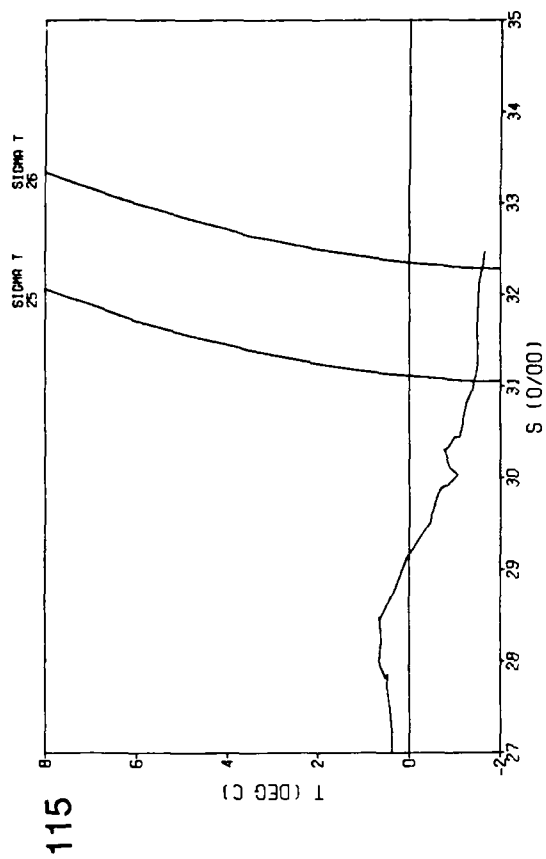
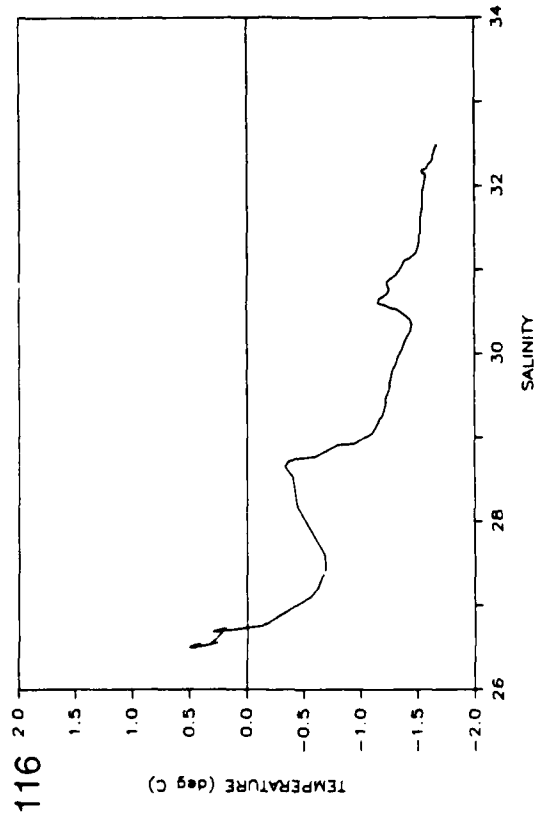
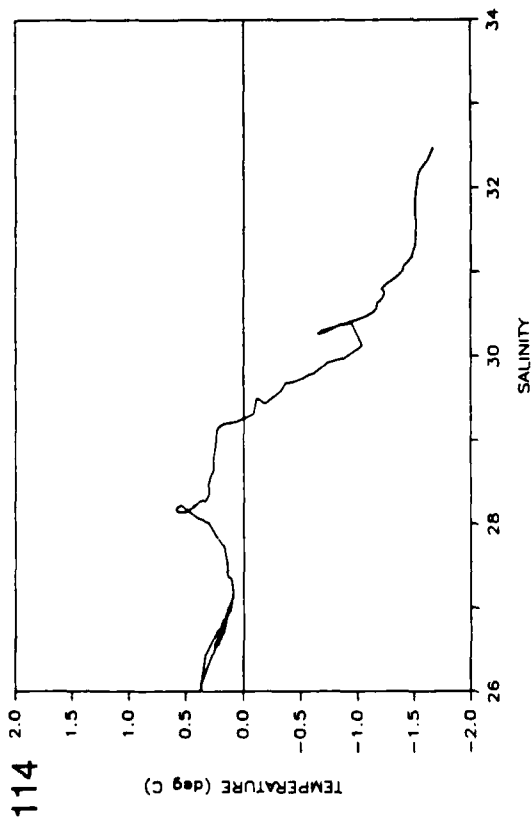
Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude

110 X 247
 111 X 0727
 112 X 247
 113 X 1034

Ship 71 54.7 157 22.6
 Ship 71 36.2 159 9.9

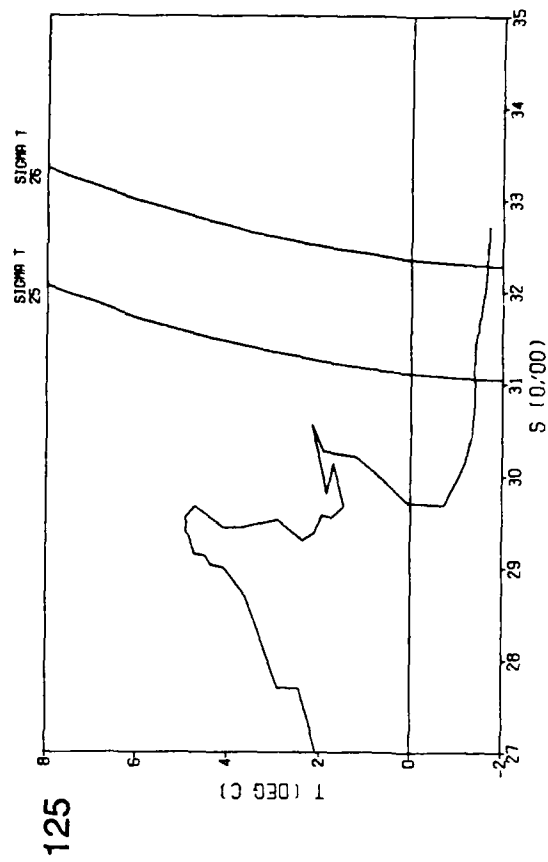
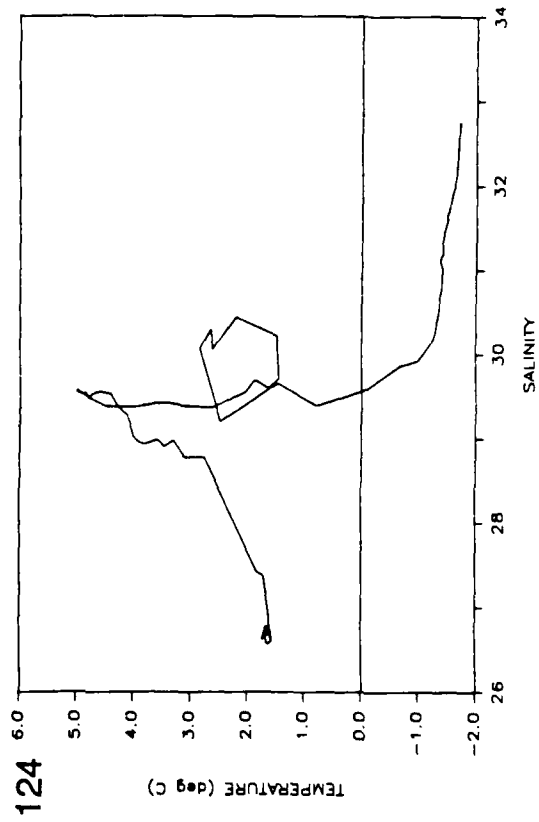
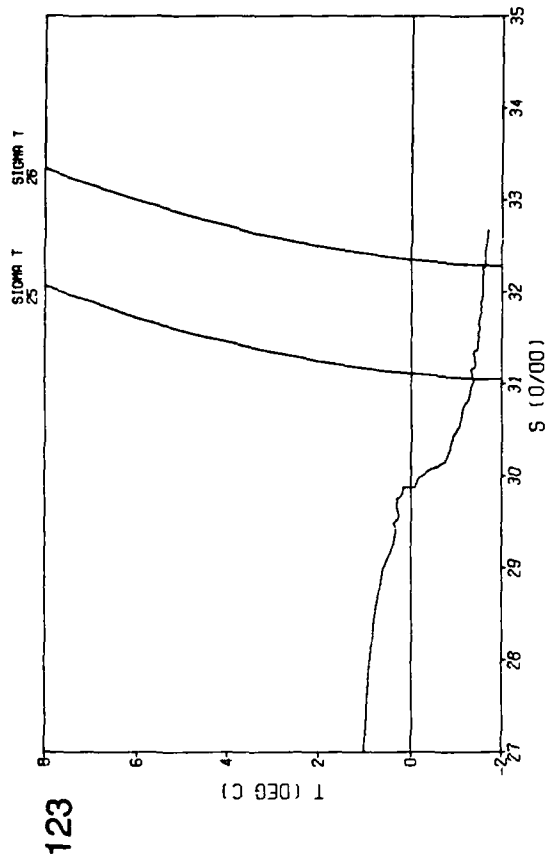
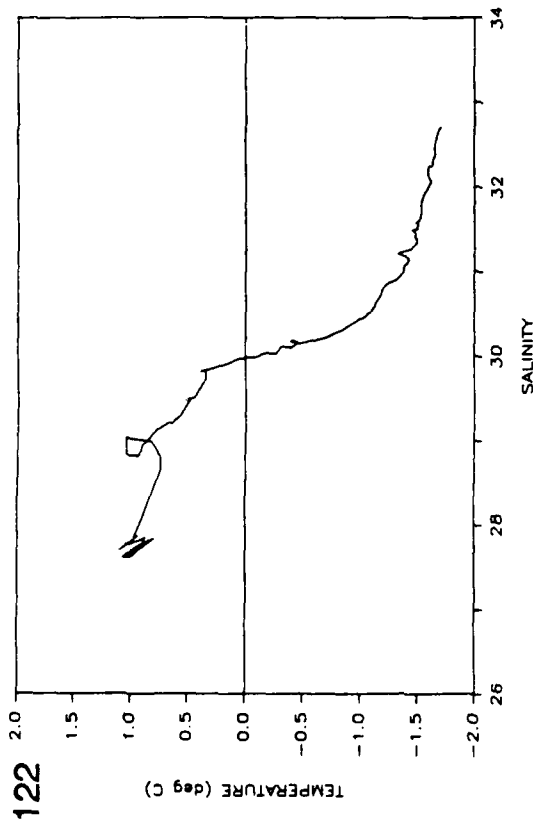


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
114	X		247	1135	Ship	71 30.5	159 3.1
115		X	247	1135	Ship	71 30.5	159 3.1
116	X		247	1221	Ship	71 27.1	158 57.9
117		X	247	1221	Ship	71 27.1	158 57.9

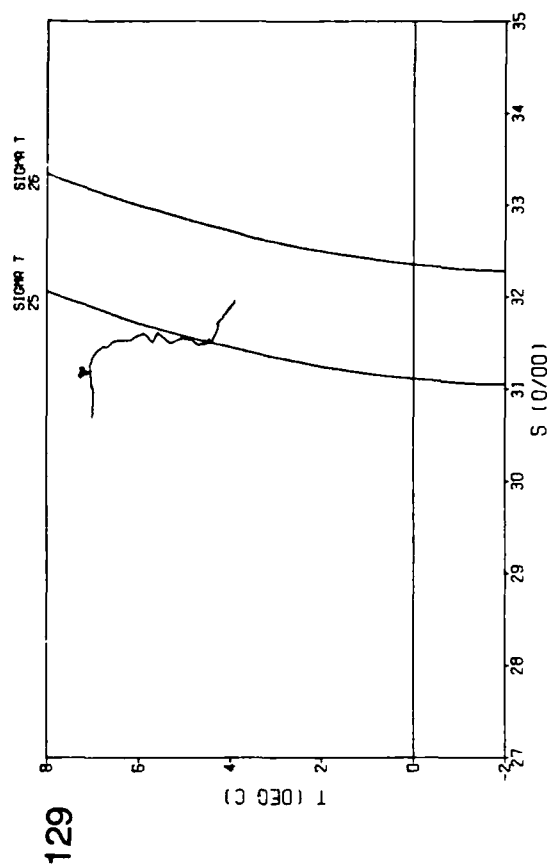
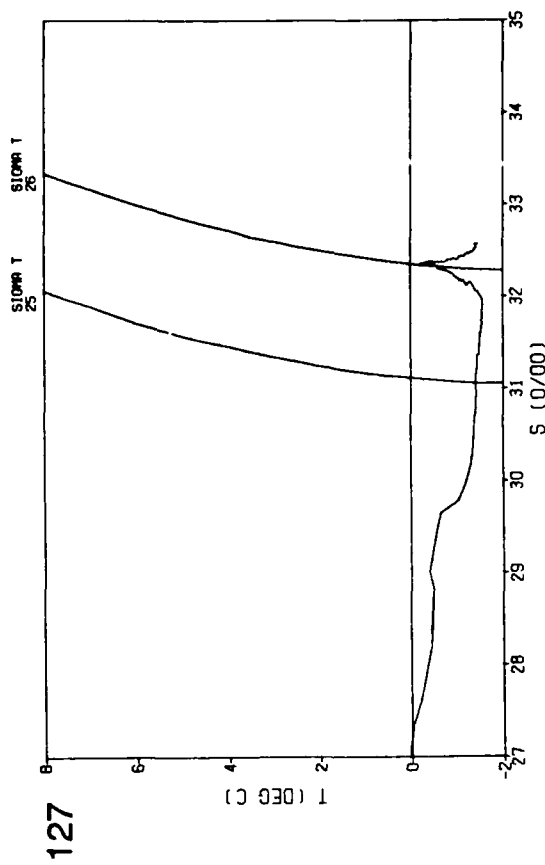
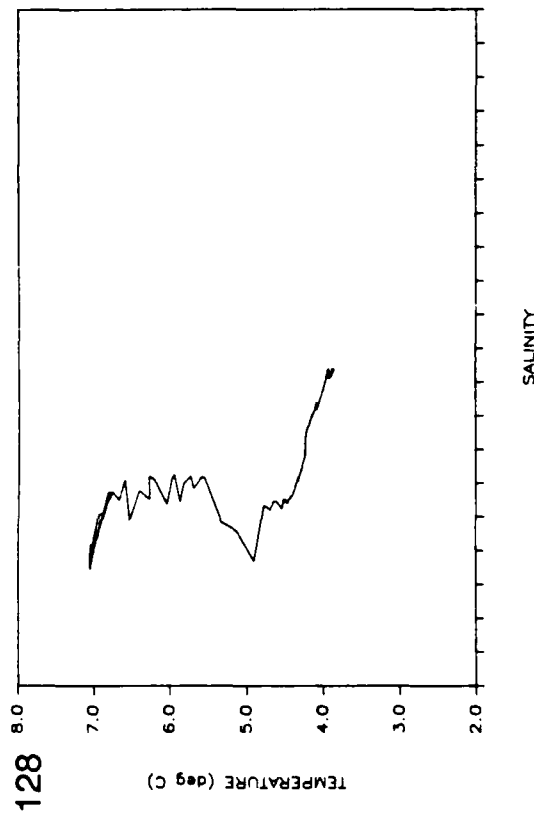
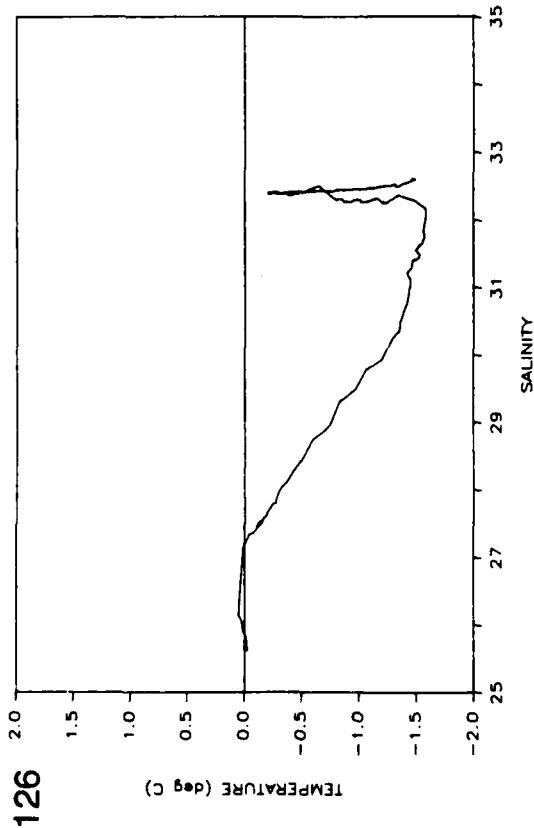


Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm
122	X		247	1438
123	X	X		
124	X		247	1521
125	X	X		

Platform	Latitude	Longitude
Ship	71 18.8	158 49.5
Ship	71 16.2	158 47.0

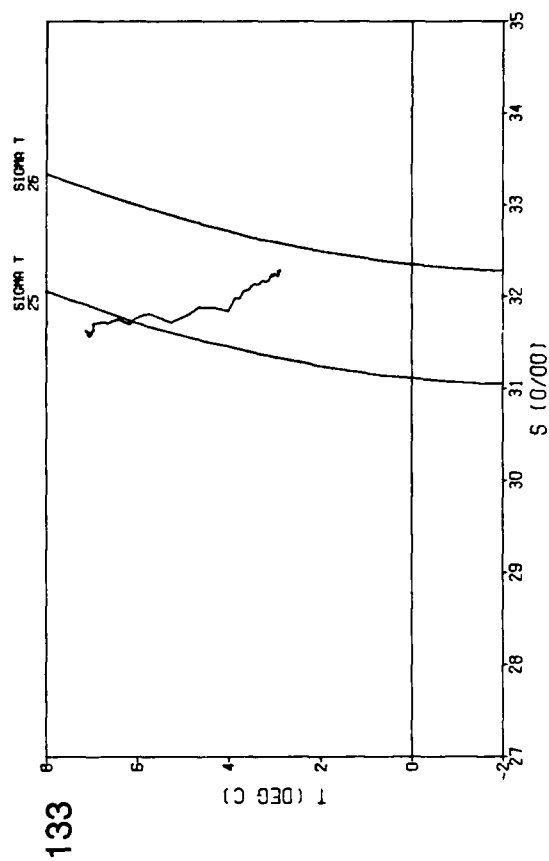
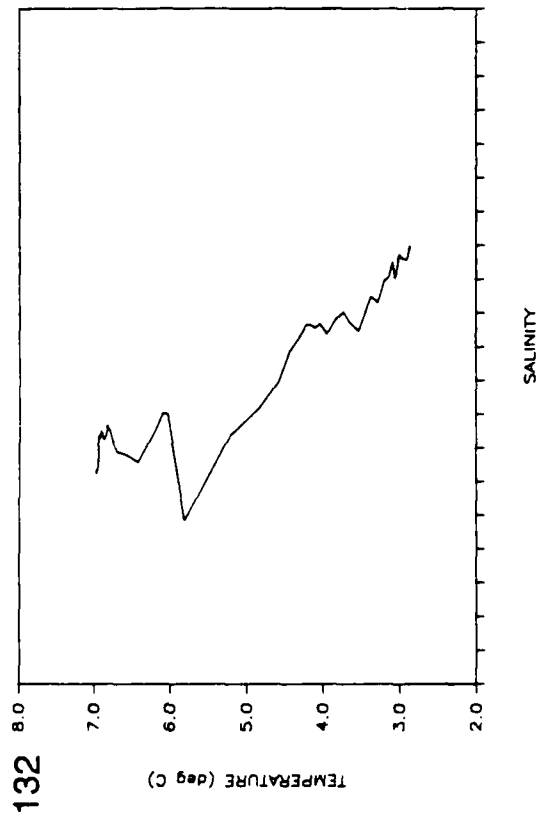
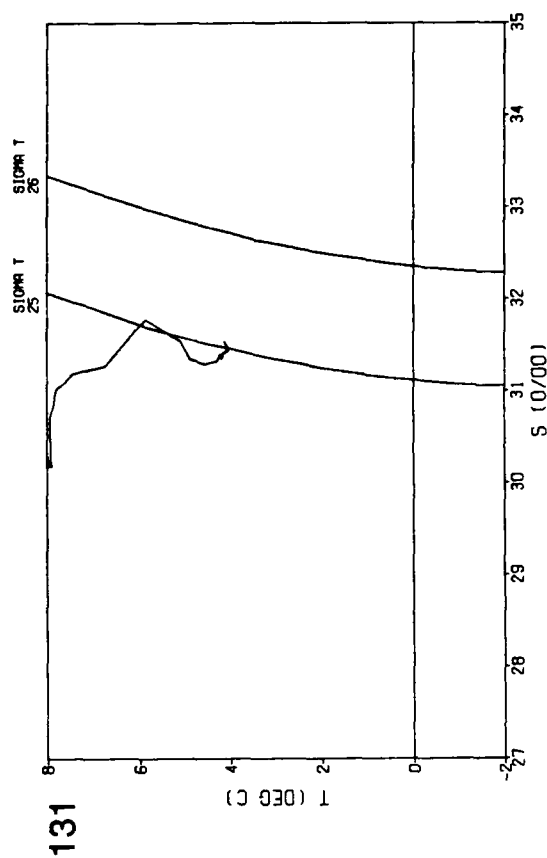
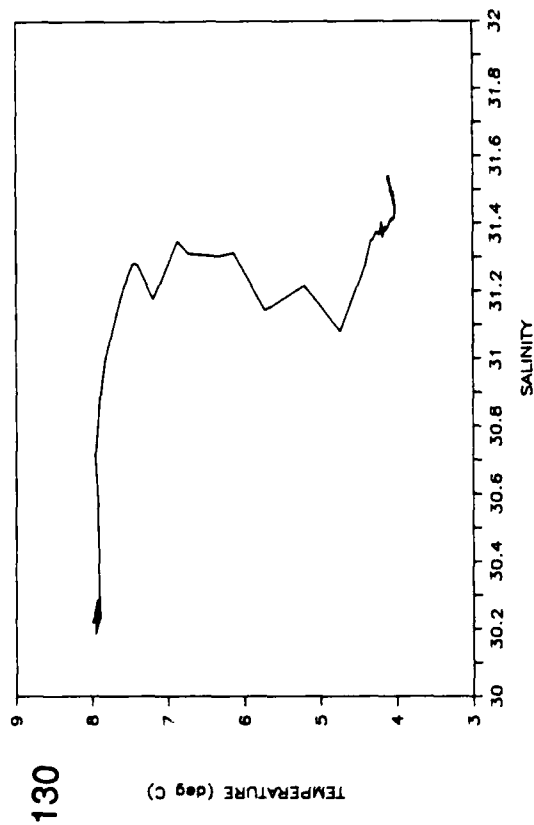


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
126	X		247	1627	Ship	71 13.6	158 43.1
127	X	X	247	1627	Ship	71 13.6	158 43.1
128	X		247	1726	Ship	71 9.0	158 38.2
129	X	X	247	1726	Ship	71 9.0	158 38.2



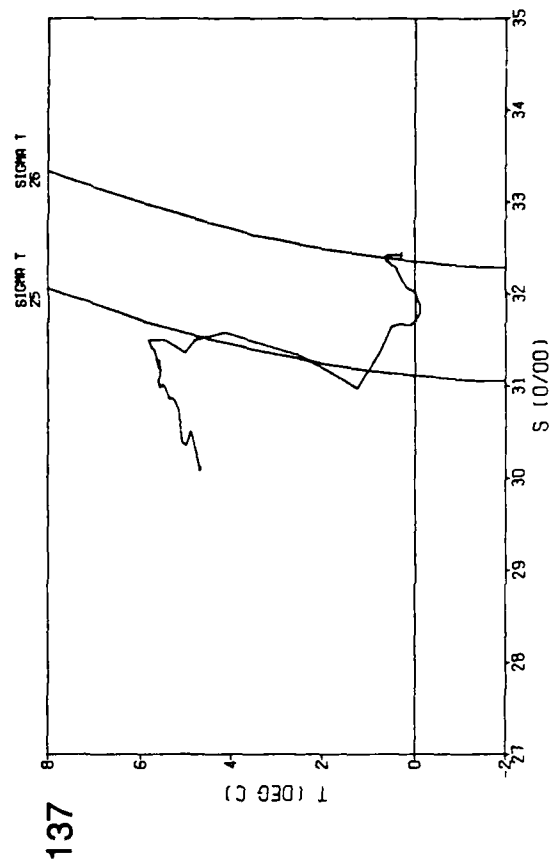
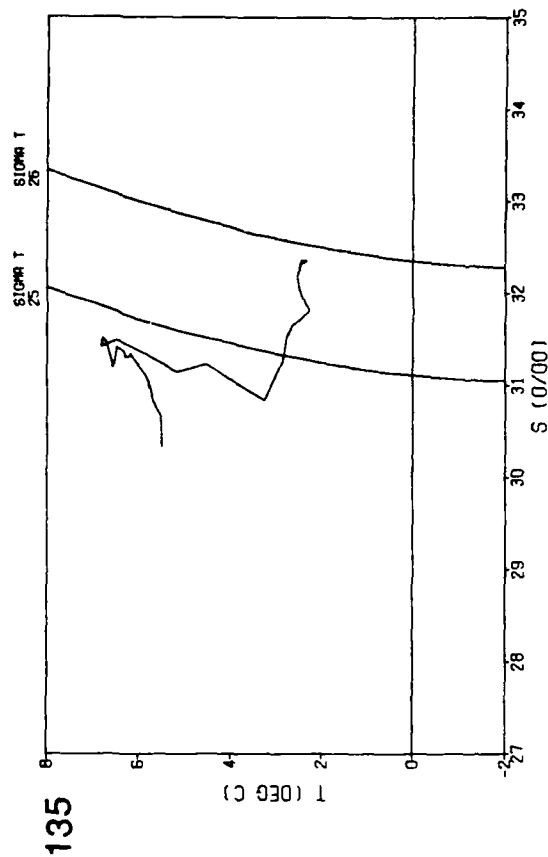
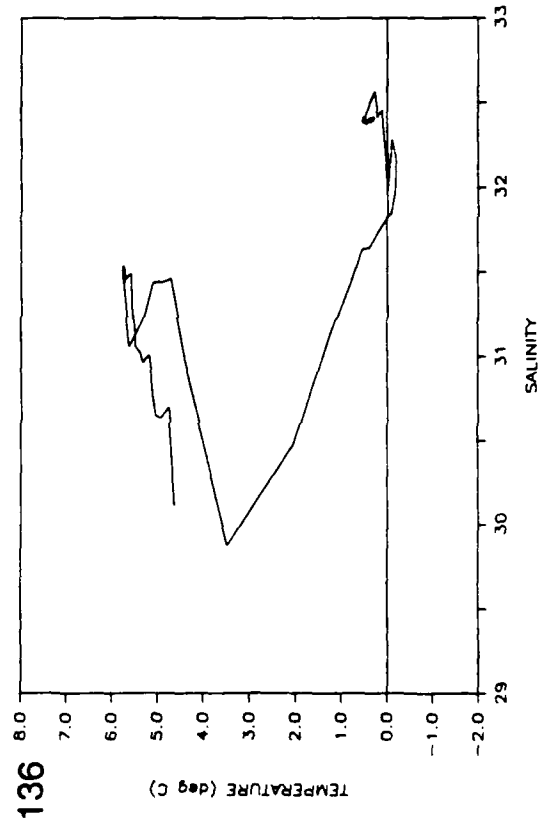
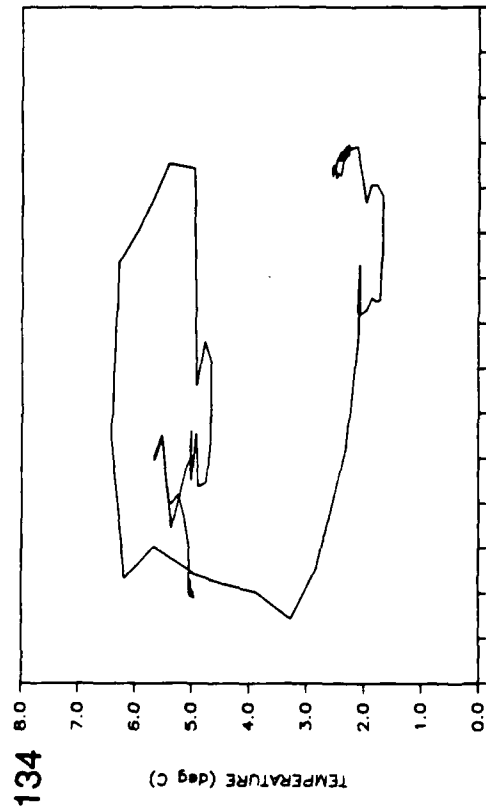
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
130	X		247	2140
131		X		
132	X		247	2236
133		X		

Platform	Latitude	Longitude
Ship	70 49.2	160 13.7
Ship	70 55.4	160 18.9



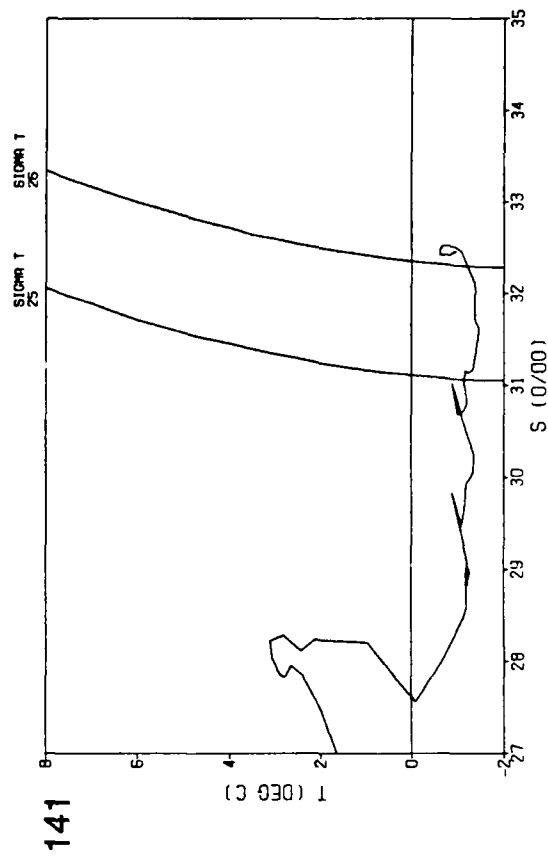
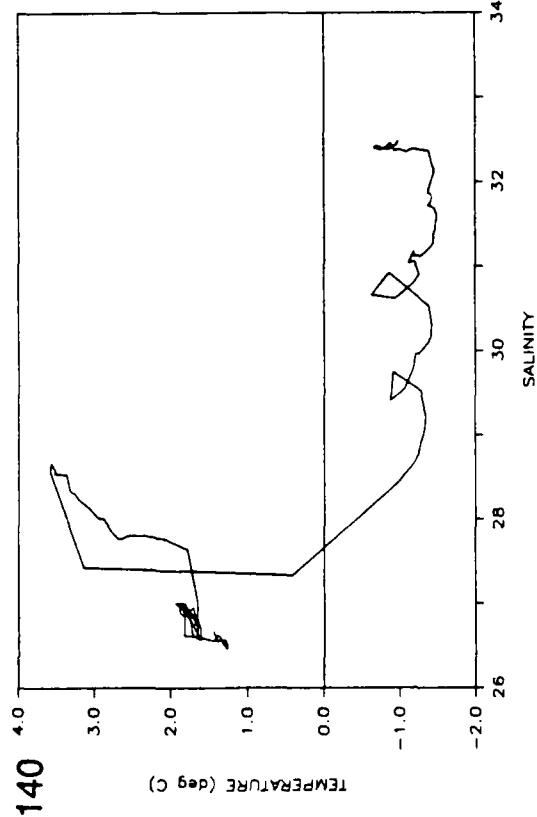
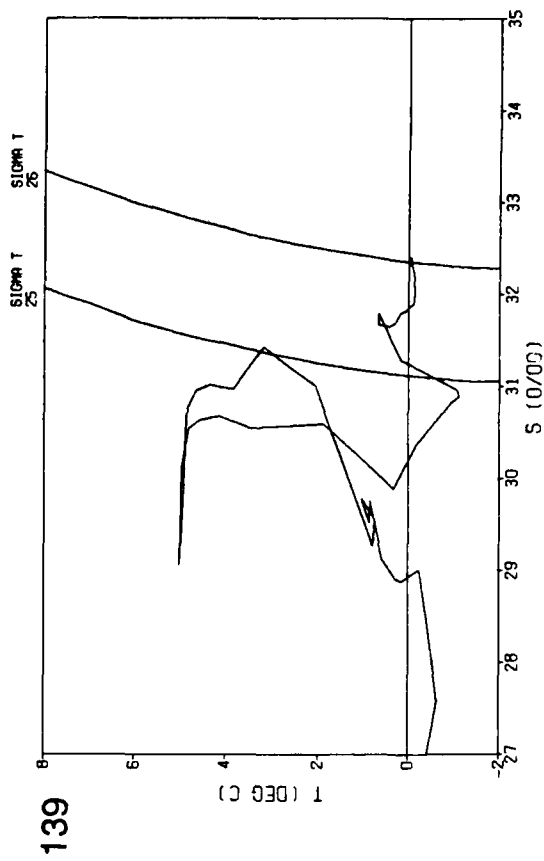
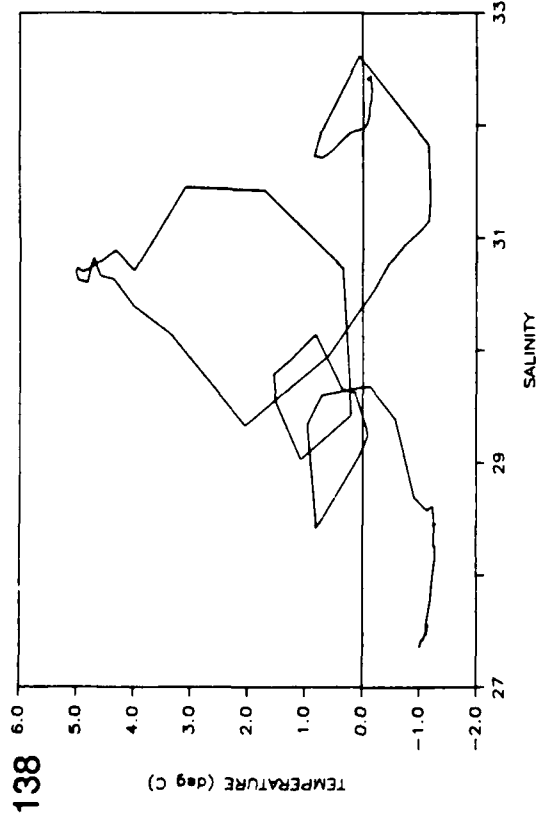
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
134	X		247	2313
135	X	X	248	0012
136	X			
137	X	X		

Platform	Latitude	Longitude
Ship	70 57.5	160 24.3
Ship	71 0.6	160 27.1

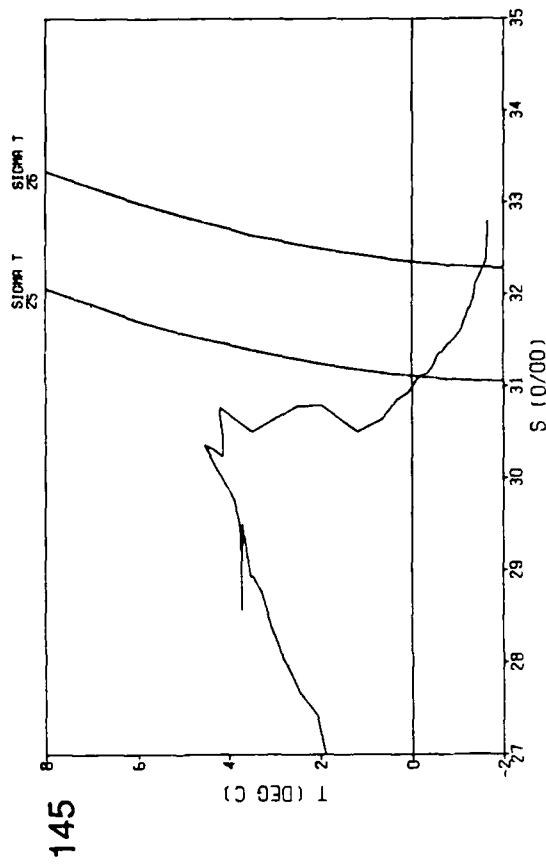
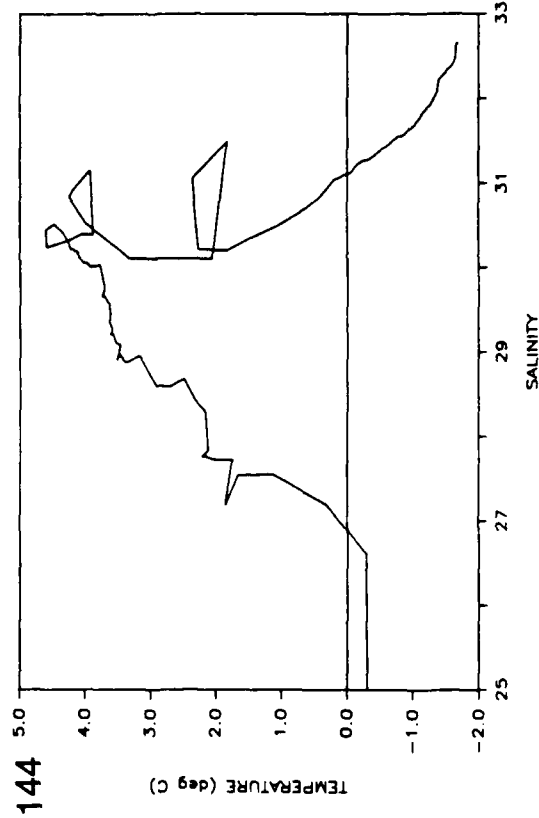
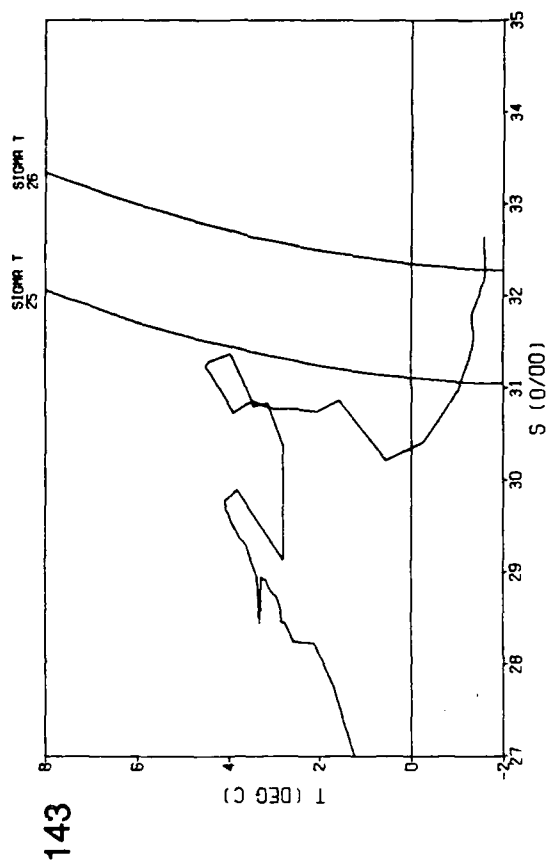
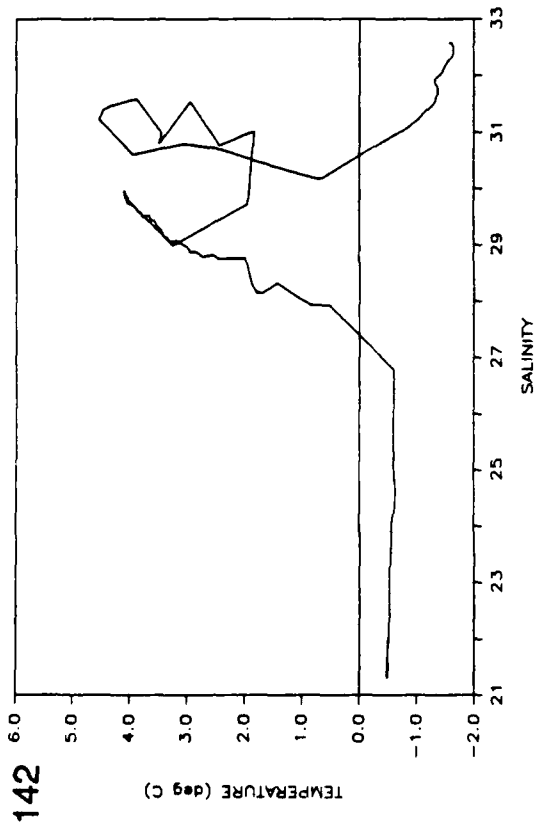


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
138	X		248	0054
139	X		248	0137
140	X		248	0137
141	X		248	0137

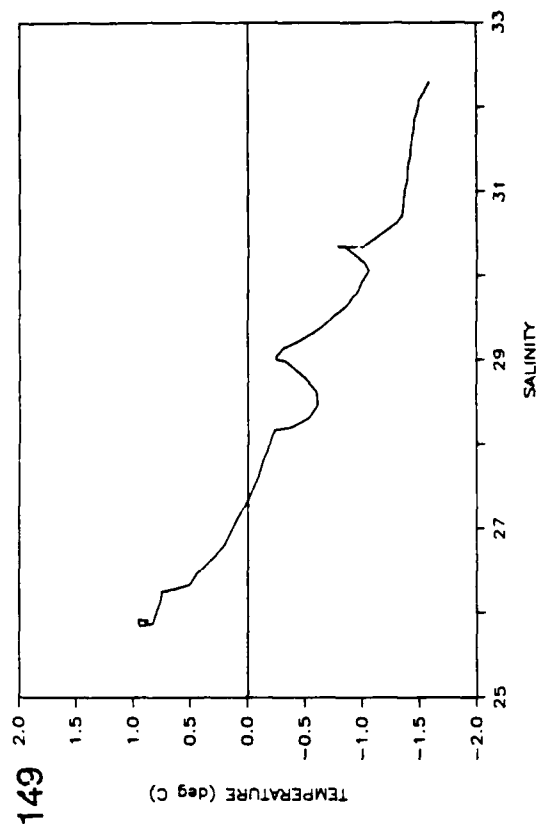
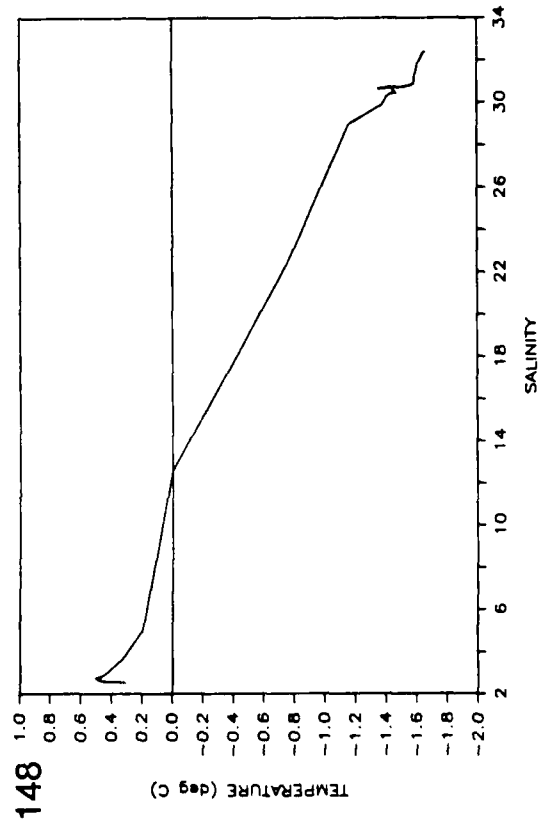
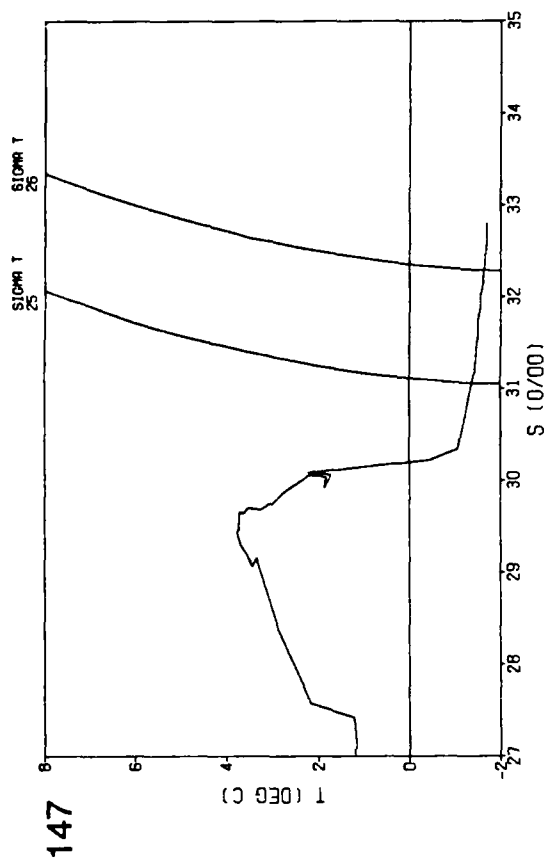
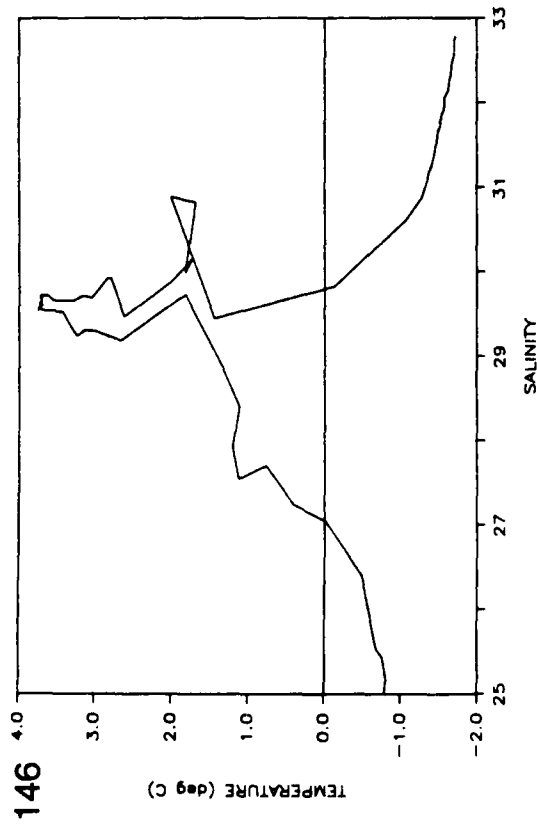
Platform	Latitude	Longitude
Ship	71 3.2	160 29.5
Ship	71 5.9	160 32.7



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
142	X		248	0244	Ship	71 8.9	160 36.5
143	X		248	0345	Ship	71 11.6	160 39.8
144	X						
145	X						

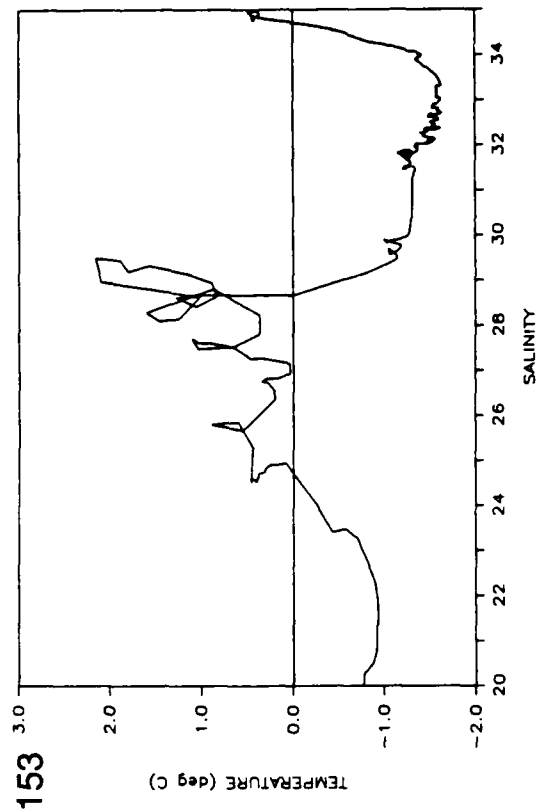
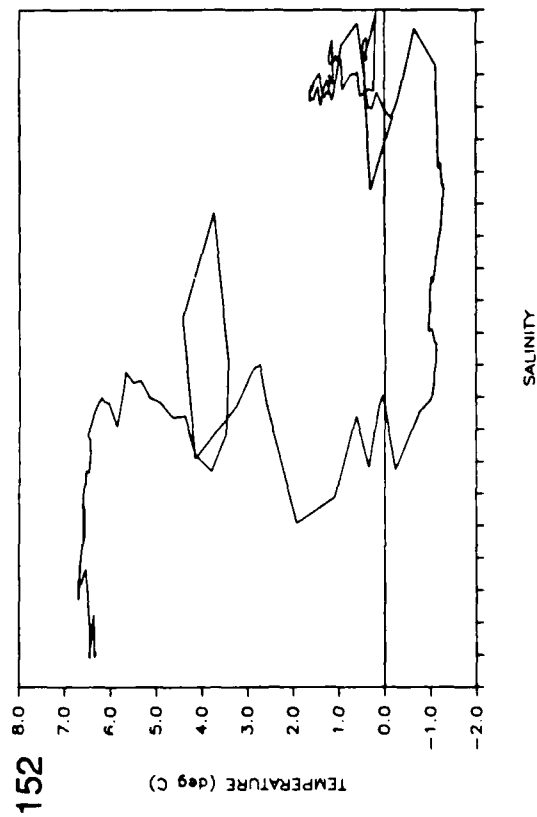
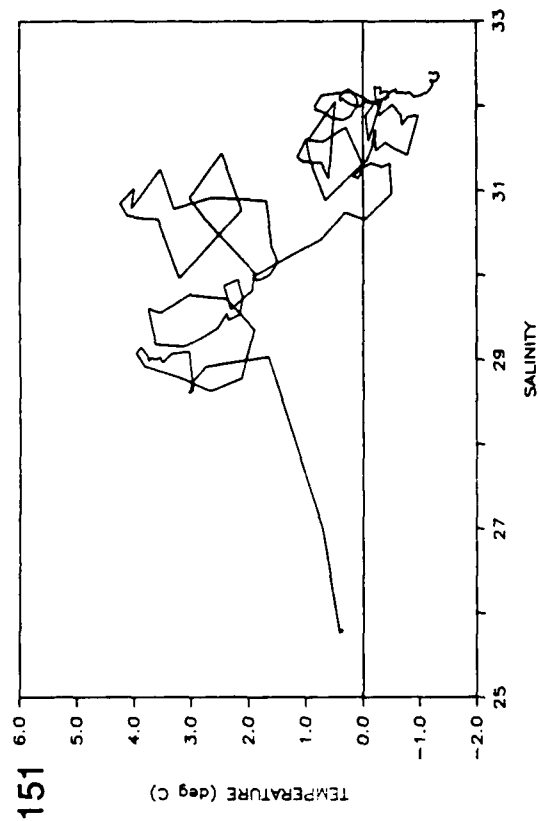
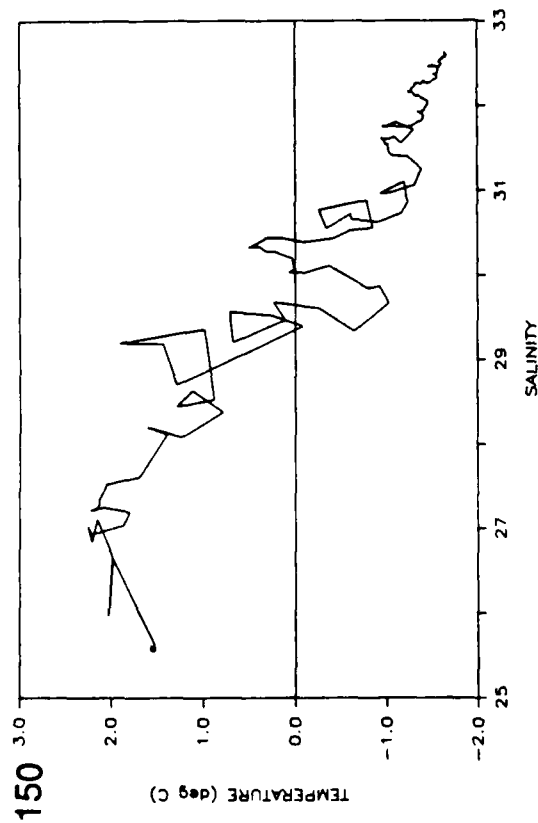


Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
146	X		248	0541	Ship	71 17.0	160 47.7
147		X					
148	X		248	1848	Ship	71 50.5	161 13.5
149	X		249	2338	Ship	72 0.0	160 0.0



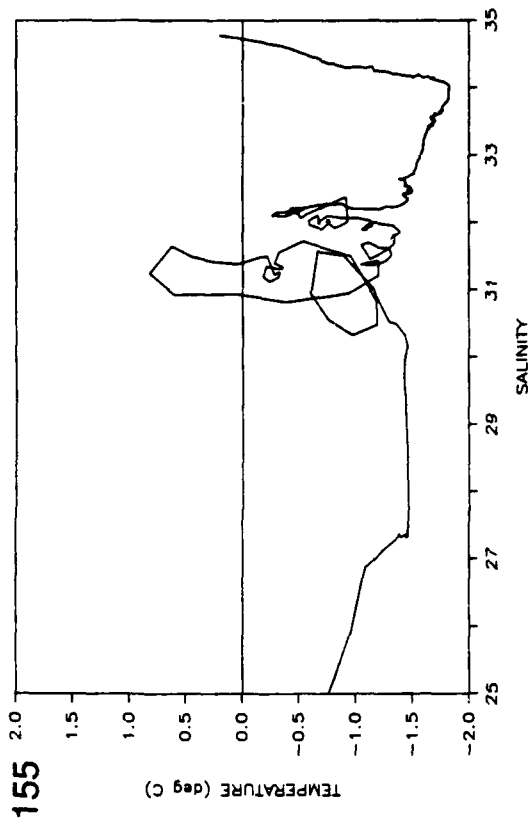
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm
150	X		249	0429
151	X		249	0648
152	X		249	0904
153	X		249	1158

Platform	Latitude	Longitude
Ship	72 0.0	156 45.7
Ship	72 0.0	155 25.5
Ship	71 59.8	154 4.6
Ship	71 59.2	152 48.5



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
154	X		249	1653	Ship	72 0.4	151 24.9
155	X		249	2341	Ship	72 0.1	150 7.3
156	X		250	0731	Ship	72 0.1	148 44.6
157	X		250	1840	Ship	71 50.0	148 43.5

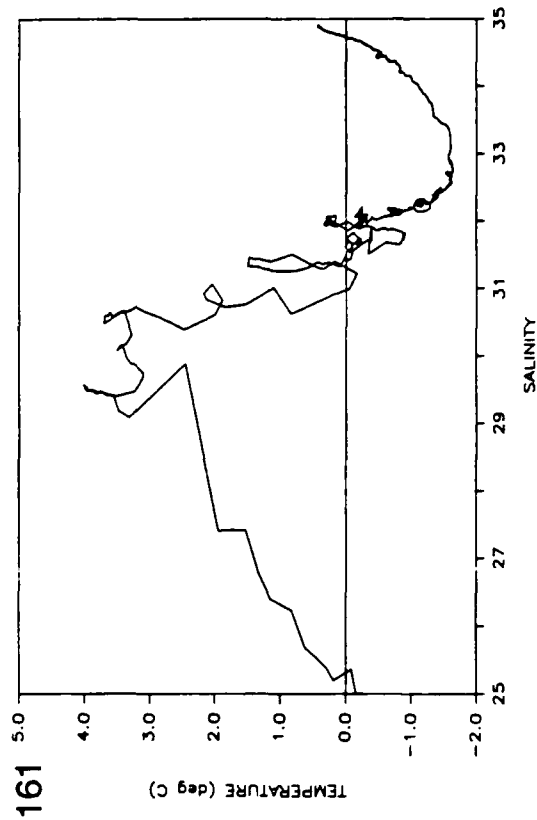
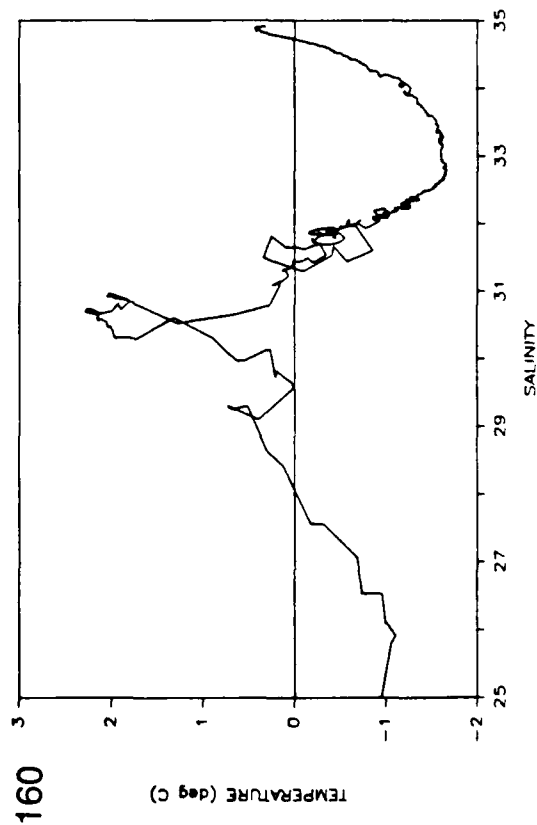
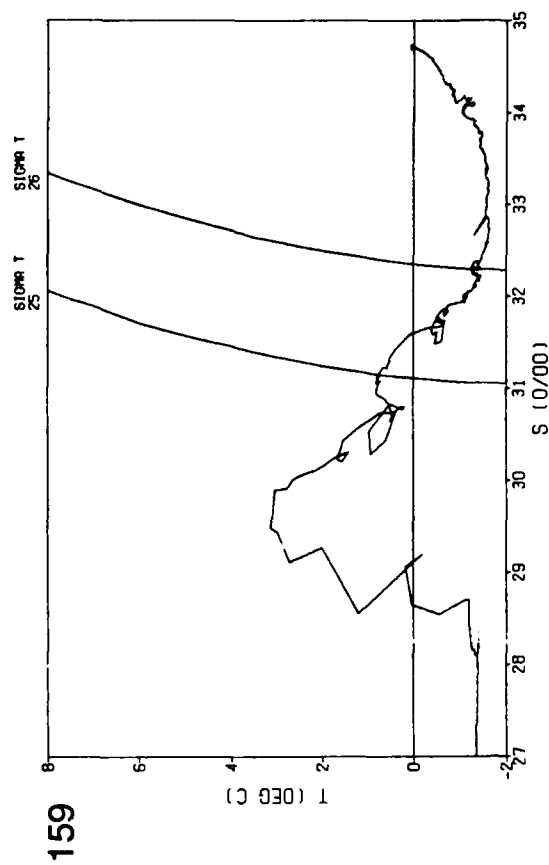
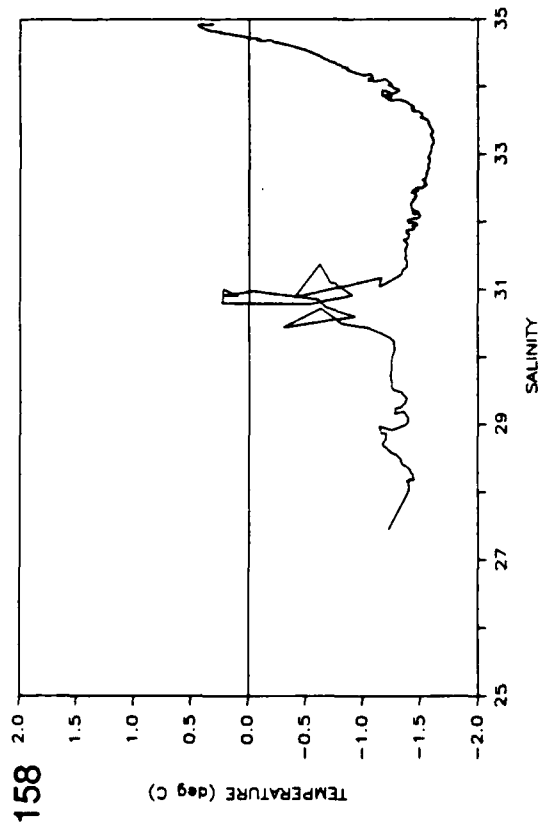
154



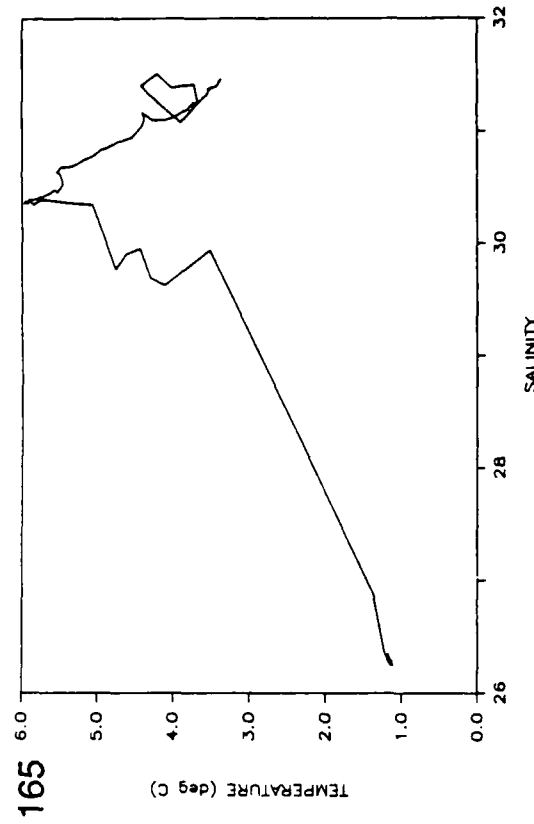
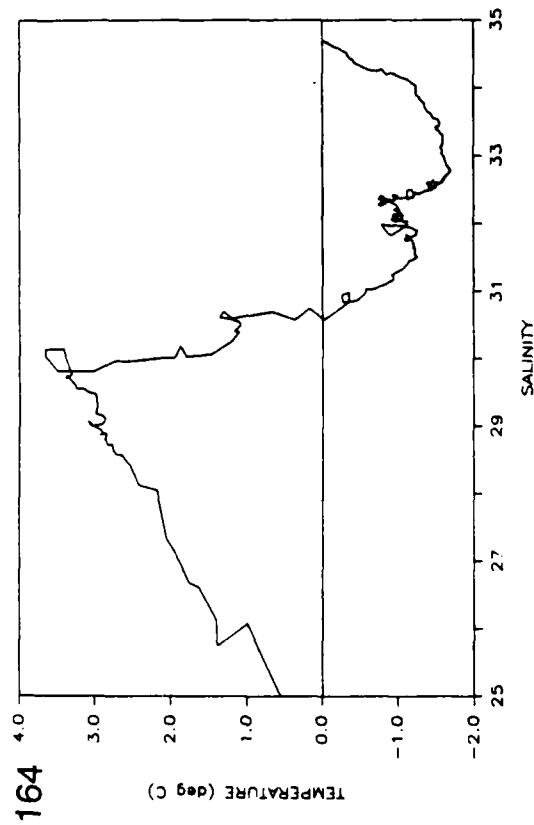
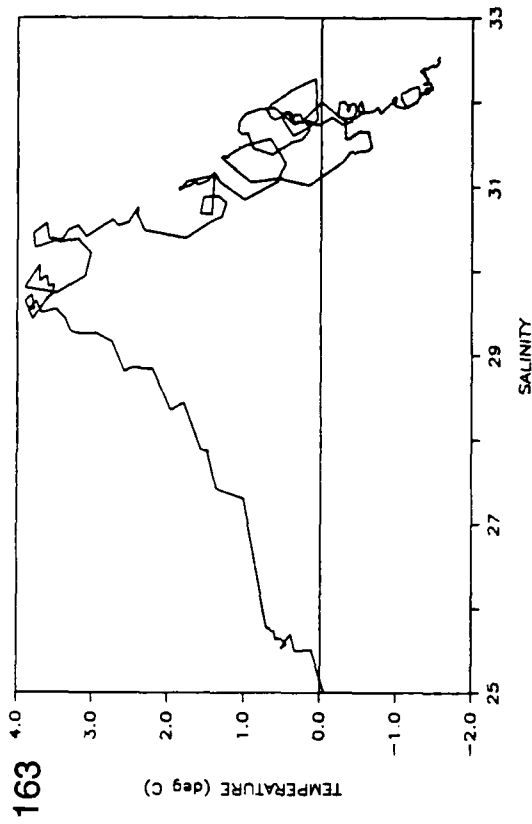
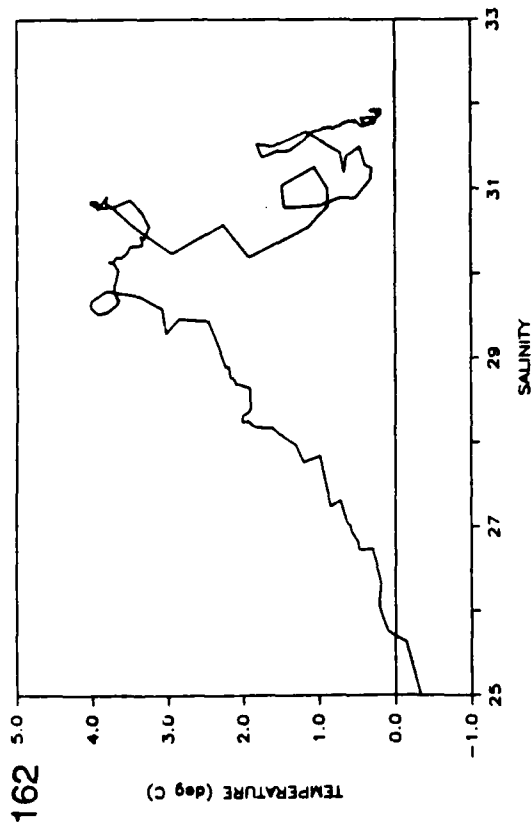
156

157

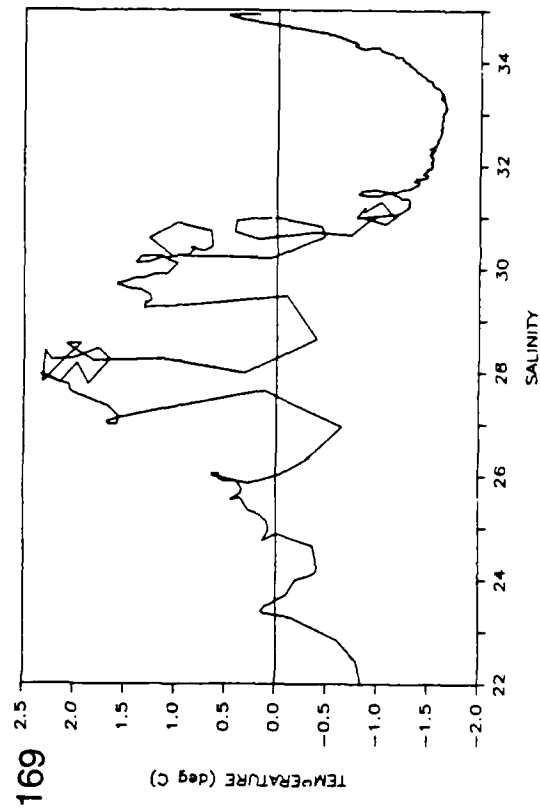
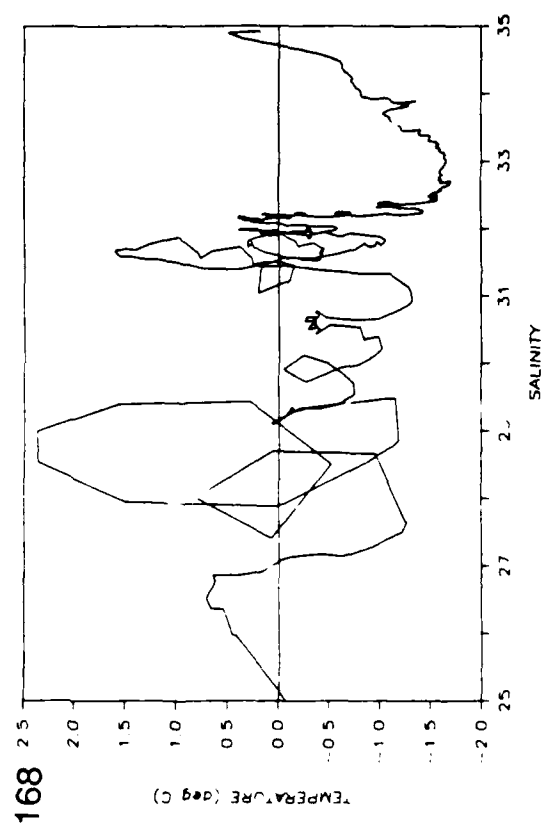
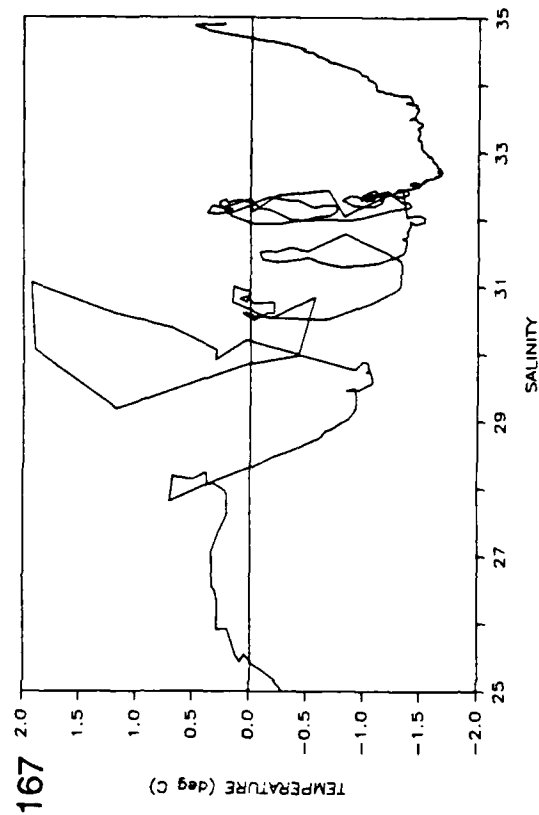
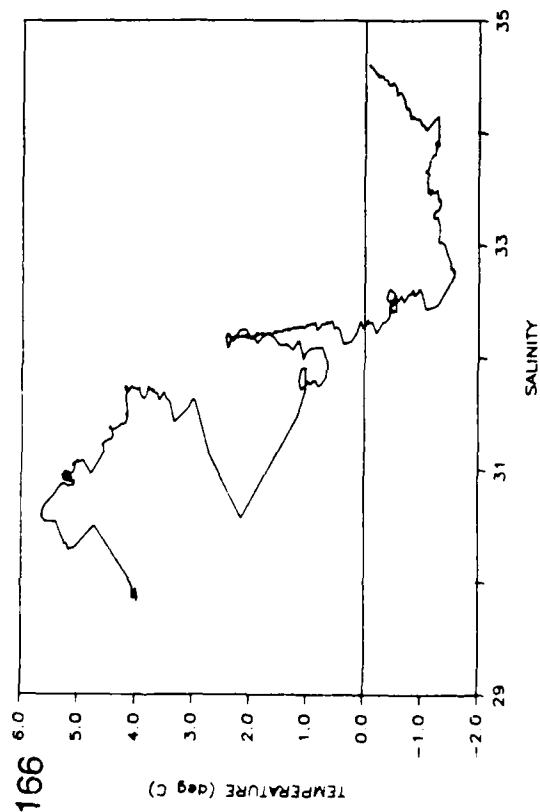
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
158	X		251	0149	Ship	71 30.3	148 43.7
159		X	251	1140	Ship	71 29.6	150 2.7
160	X		251	1728	Ship	71 31.6	151 2.5
161	X		251	2036	Ship	71 31.2	151 35.3



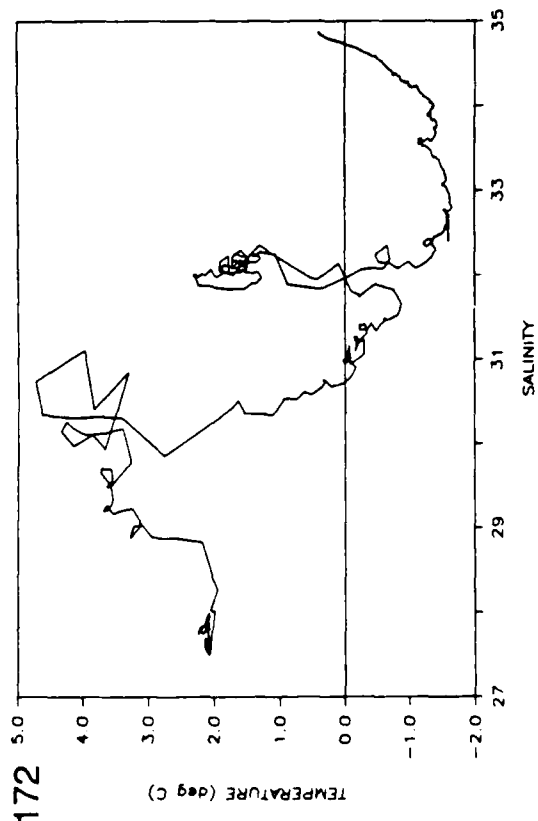
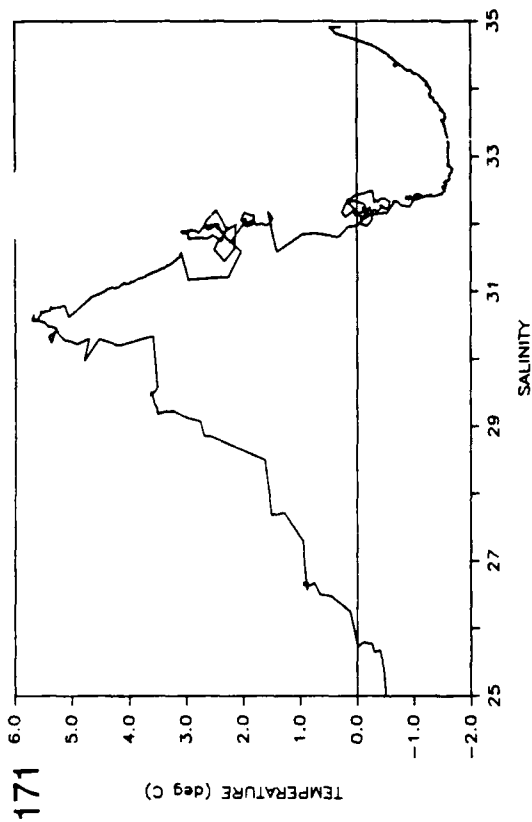
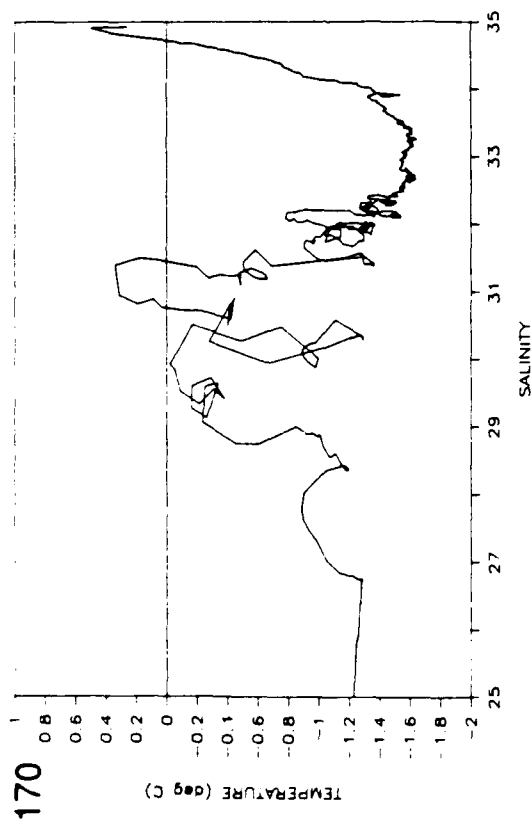
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
162	X		252	0018	Ship	71 22.2	151 32.5
163	X		252	0252	Ship	71 31.7	152 25.2
164	X		252	0540	Ship	71 44.1	152 57.0
165	X		252	0952	Ship	71 43.7	154 17.3



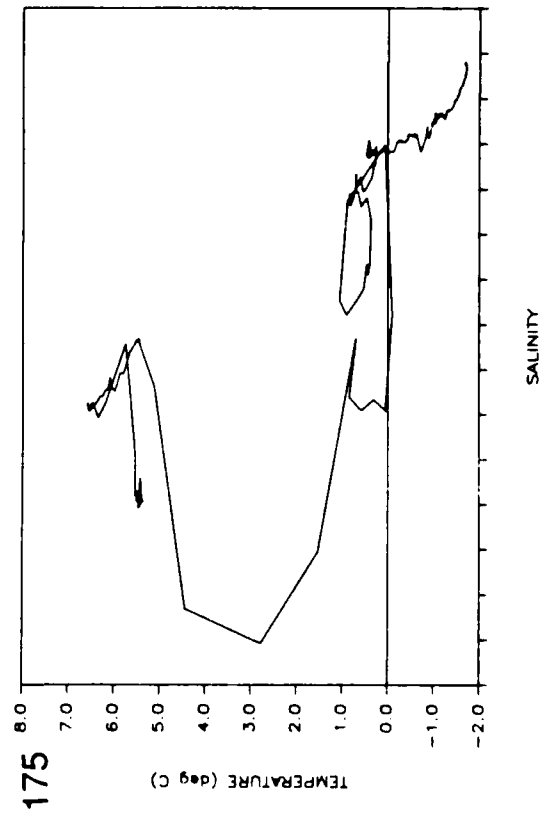
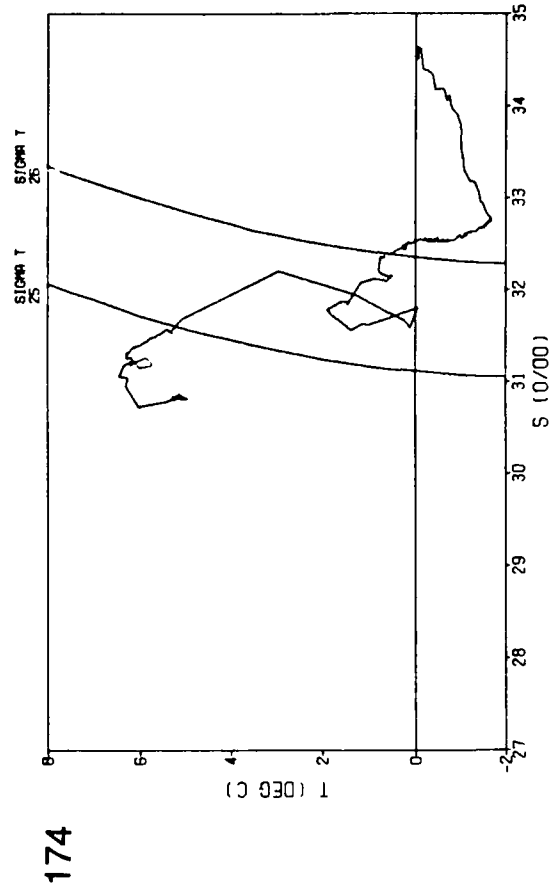
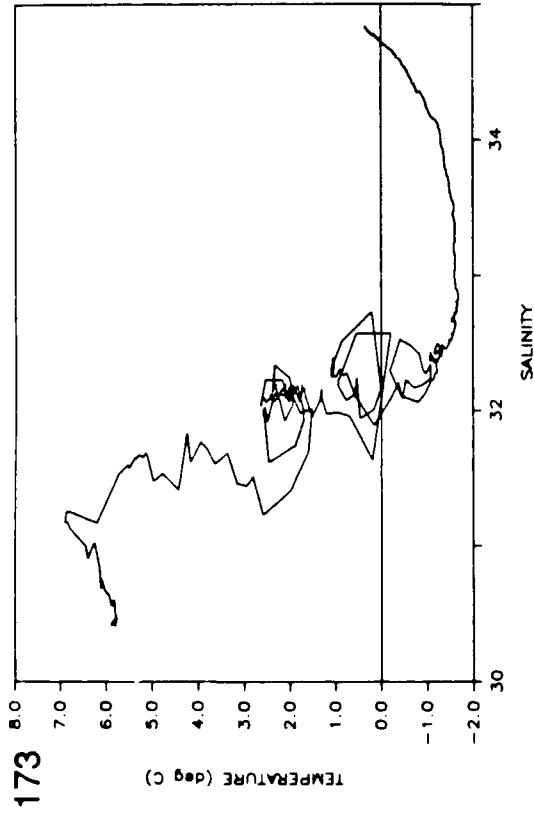
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
166	X		252	1213	Ship	71 38.6	155 35.3
167	X		253	0633	Ship	72 19.4	155 6.6
168	X		253	1122	Ship	72 39.8	154 58.0
169	X		253	1648	Ship	72 59.9	155 1.4



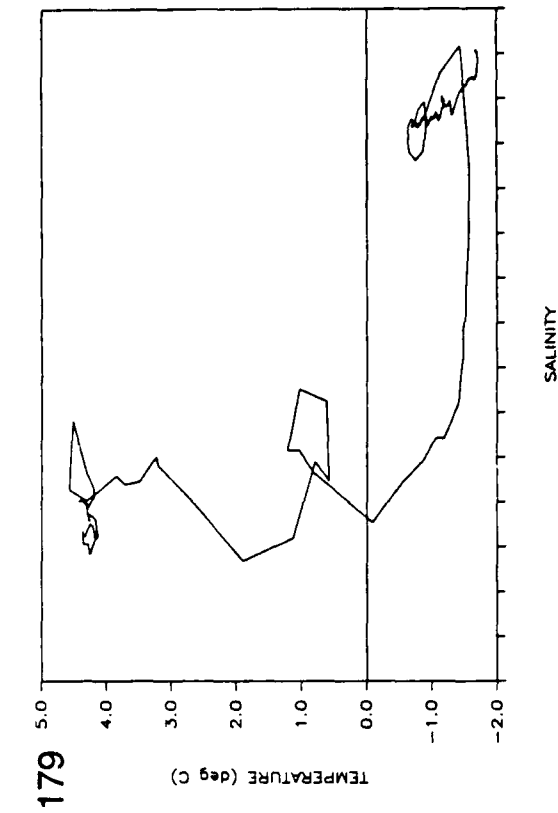
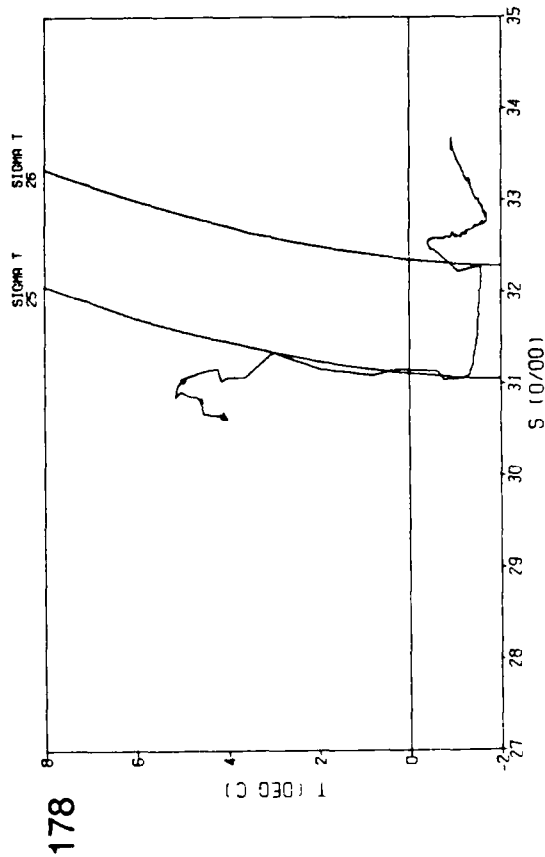
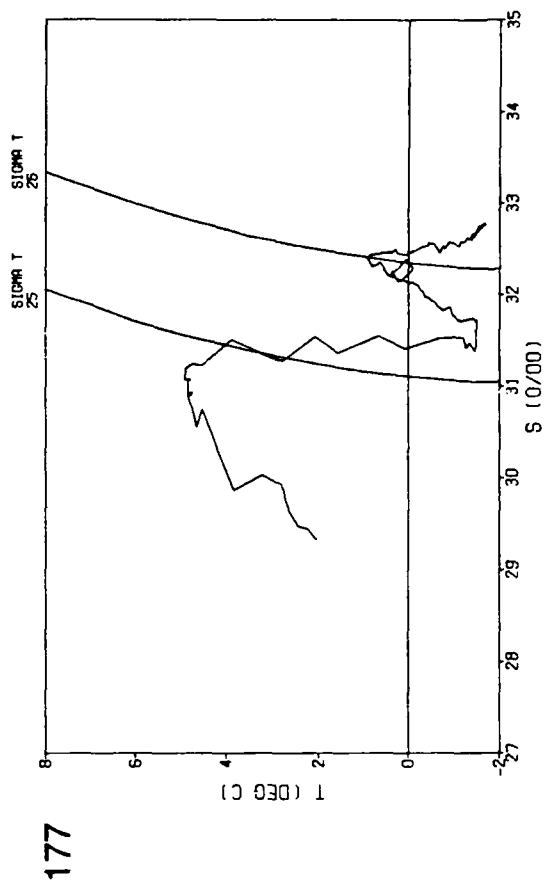
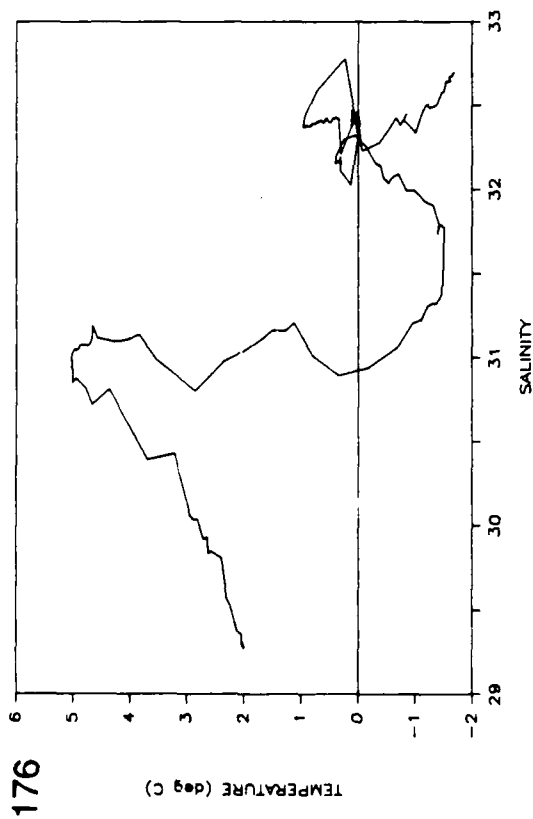
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
170	X		253	2331	Ship	72 33.8	154 10.6
171	X		255	0233	Ship	72 11.6	154 43.0
172	X		255	0443	Ship	72 2.6	154 53.6



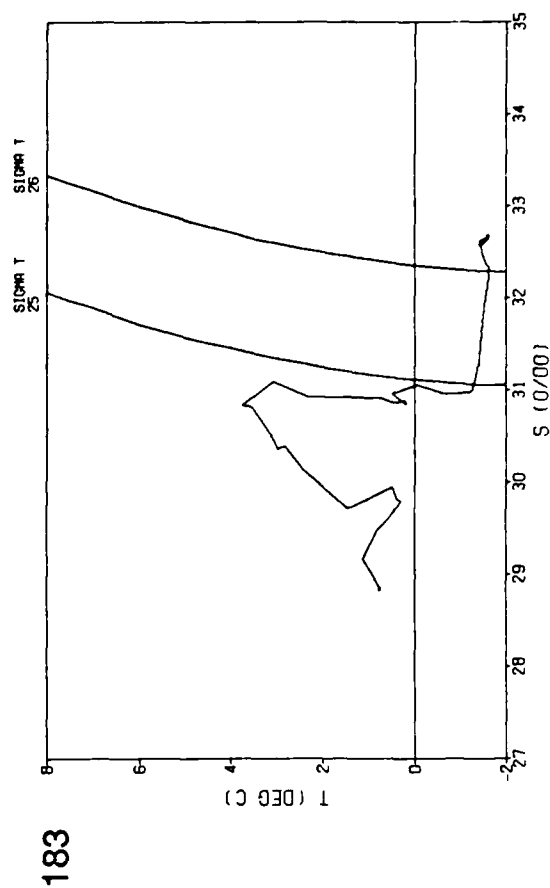
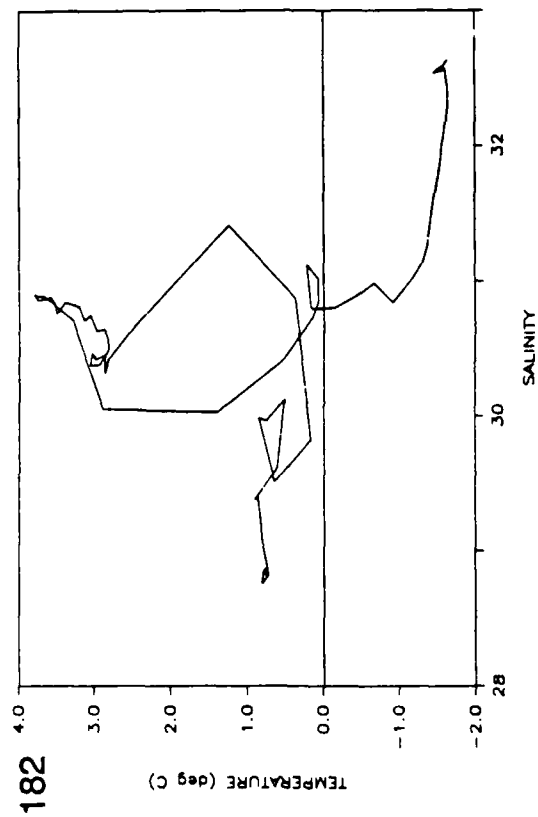
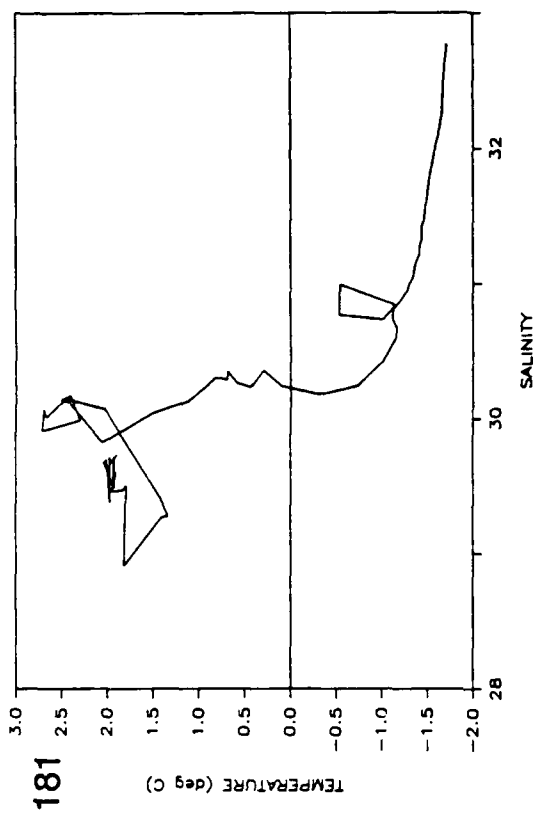
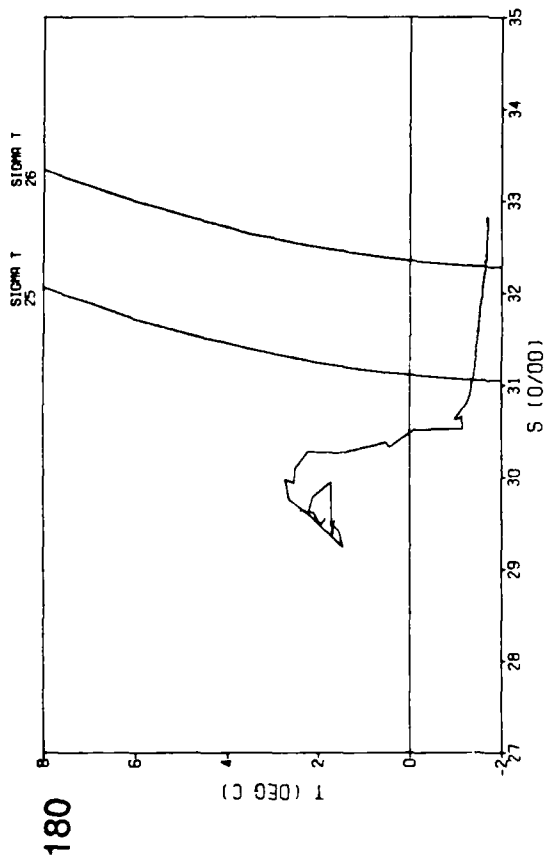
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
173	X		255	0622	Ship	71 53.1	154 58.5
174		X	255	0829	Ship	71 42.0	155 39.7
175	X						



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
176	X		255	0948	Ship	71 38.9	156 6.6
177		X	255	1130	Ship	71 35.2	156 32.5
178	X						
179		X					

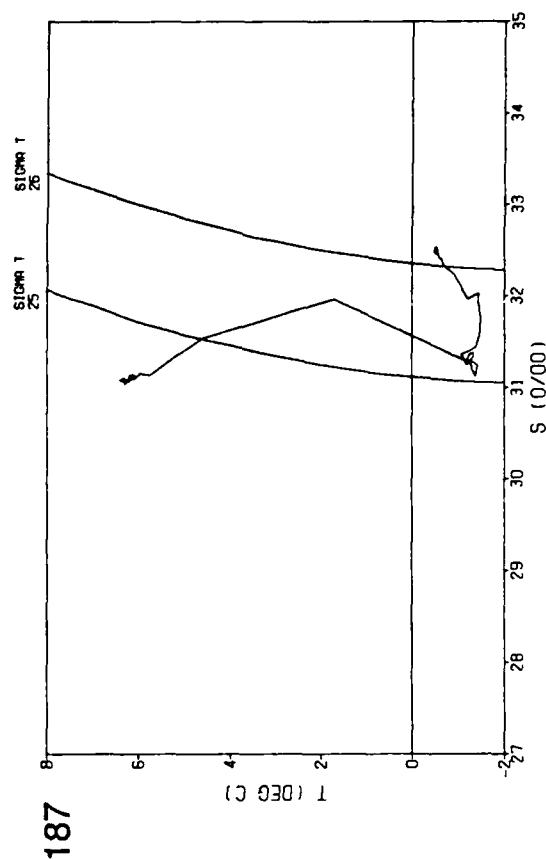
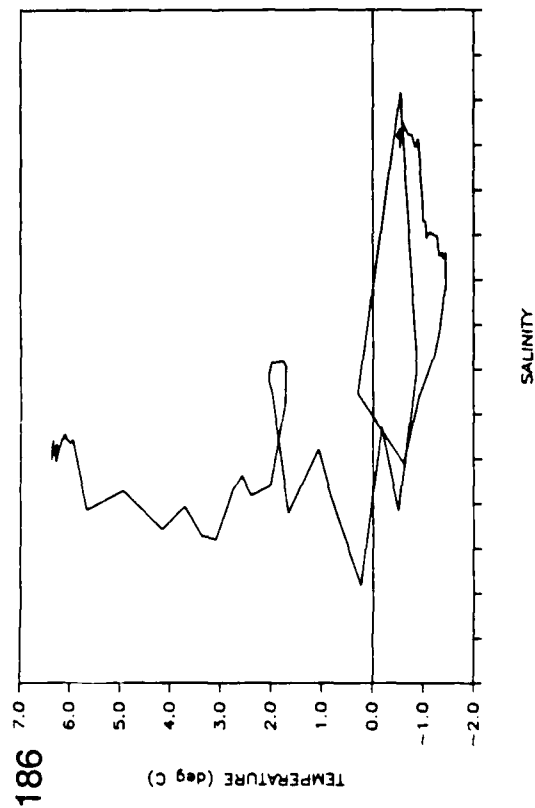
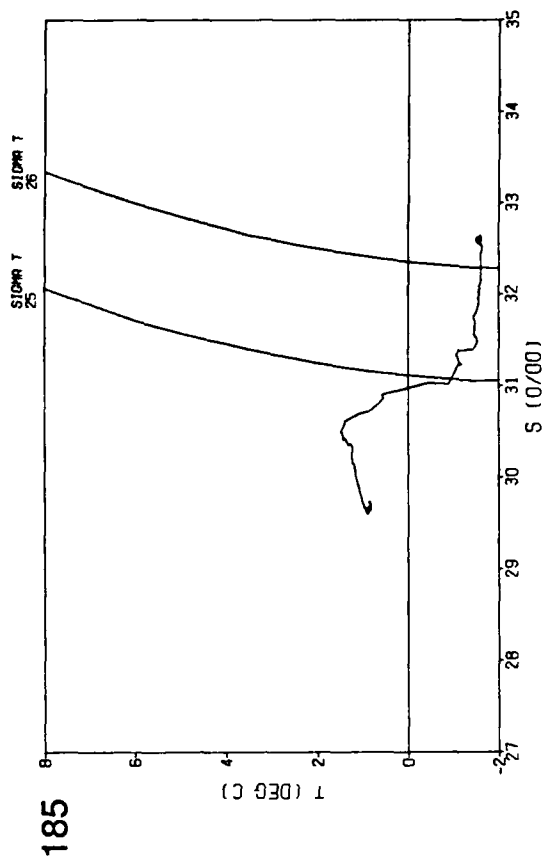
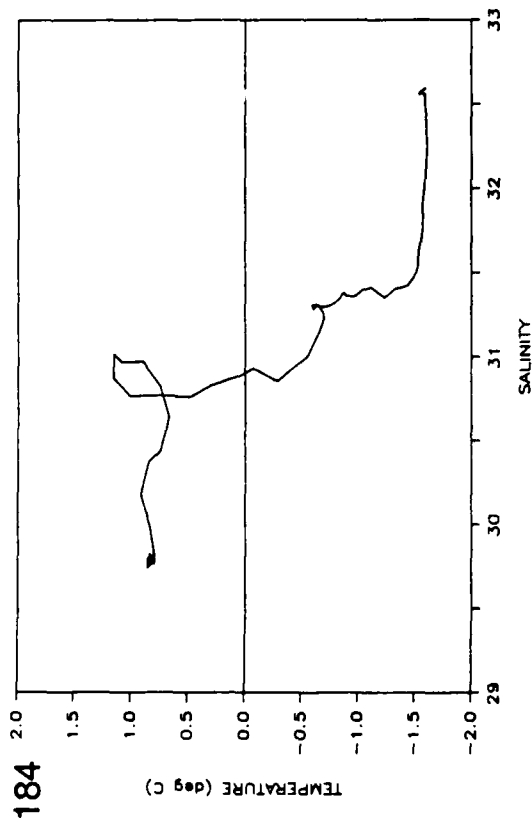


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183		X	255	1504	Ship	71 21.2	157 57.8



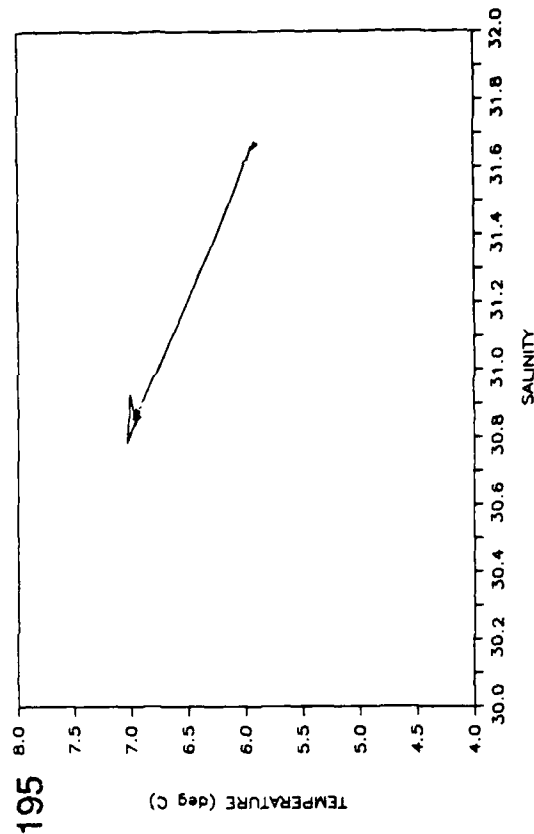
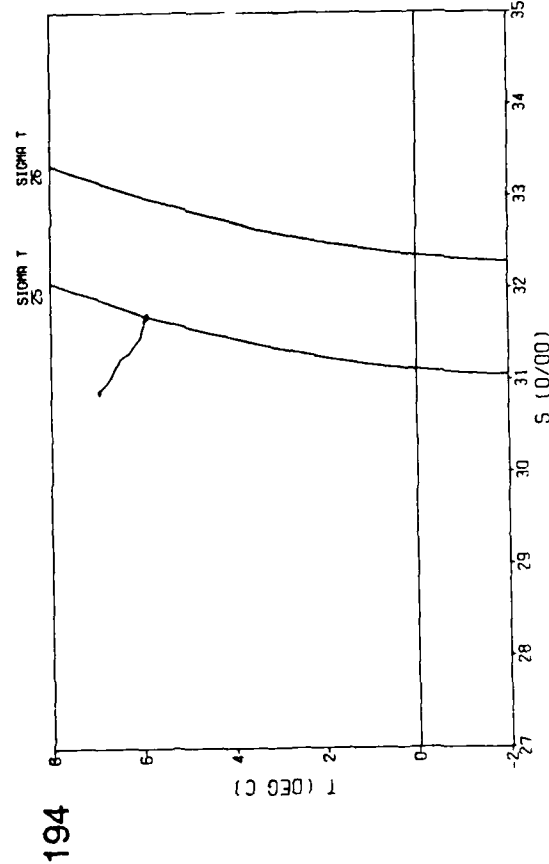
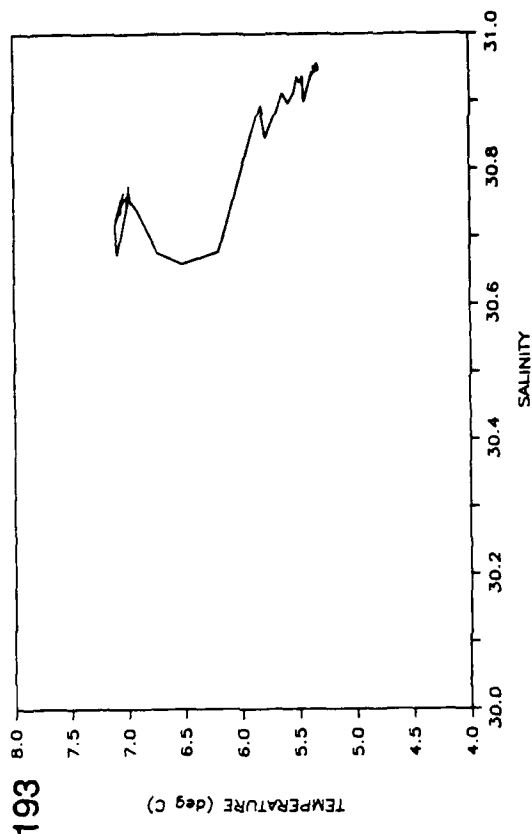
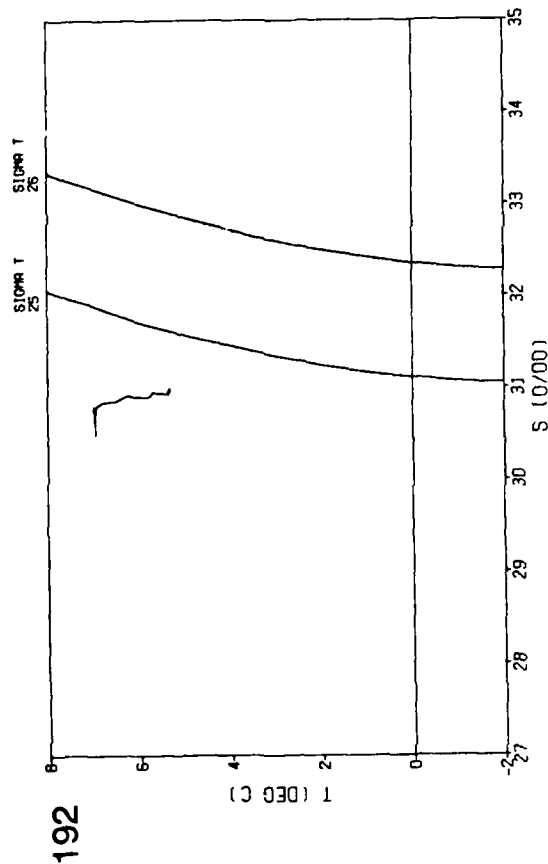
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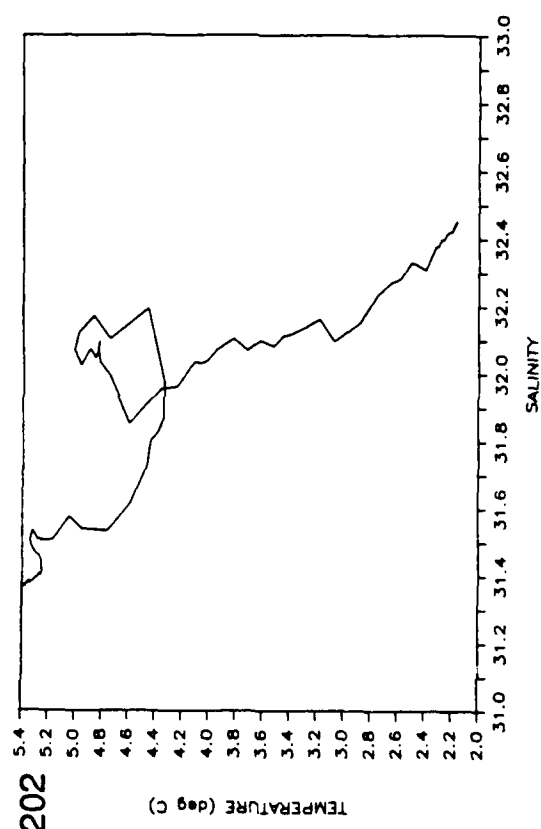
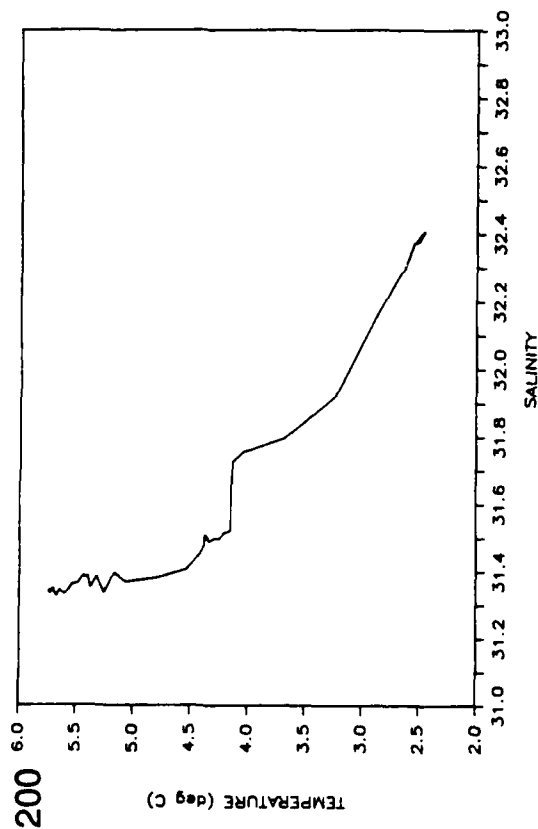
Platform	Latitude	Longitude
Ship	71 16.3	158 26.0
Ship	71 6.5	159 17.9



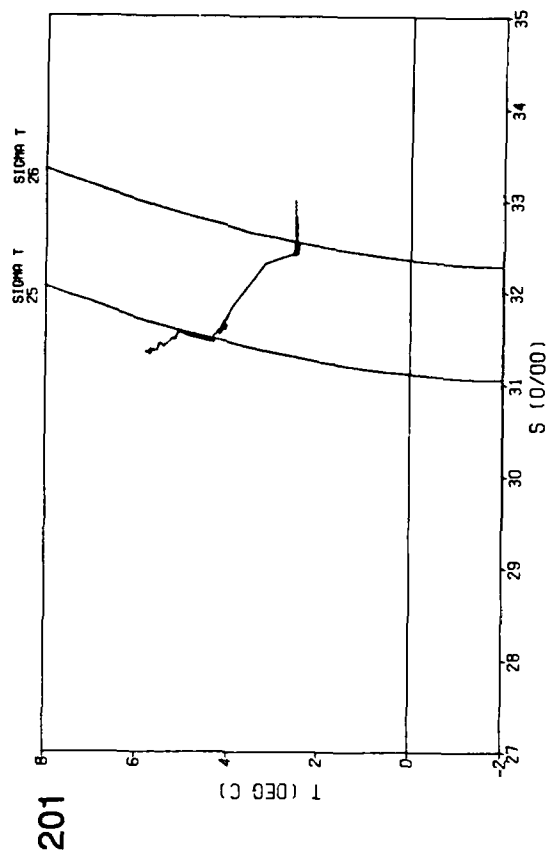
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192		X	256	0205
193	X		256	0309
194	X			
195				

Platform	Latitude	Longitude
Ship	70 49.0	160 14.3
Ship	70 54.6	160 20.7

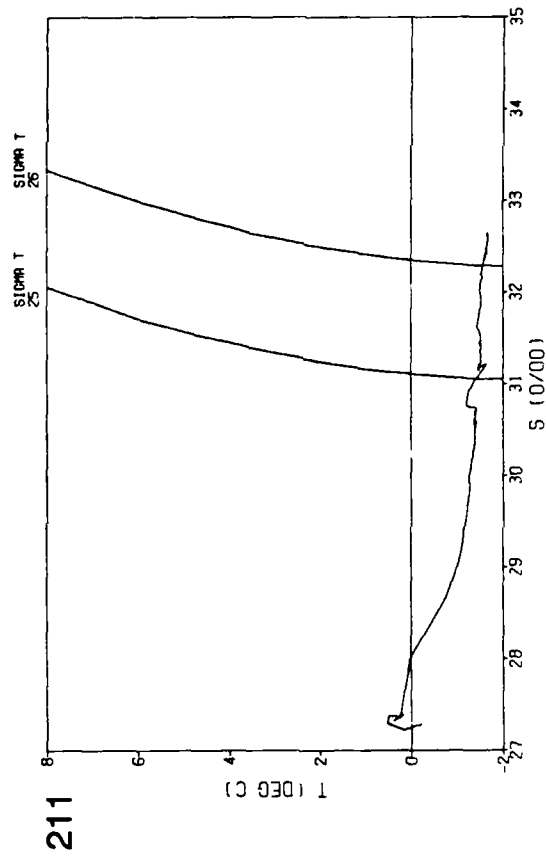
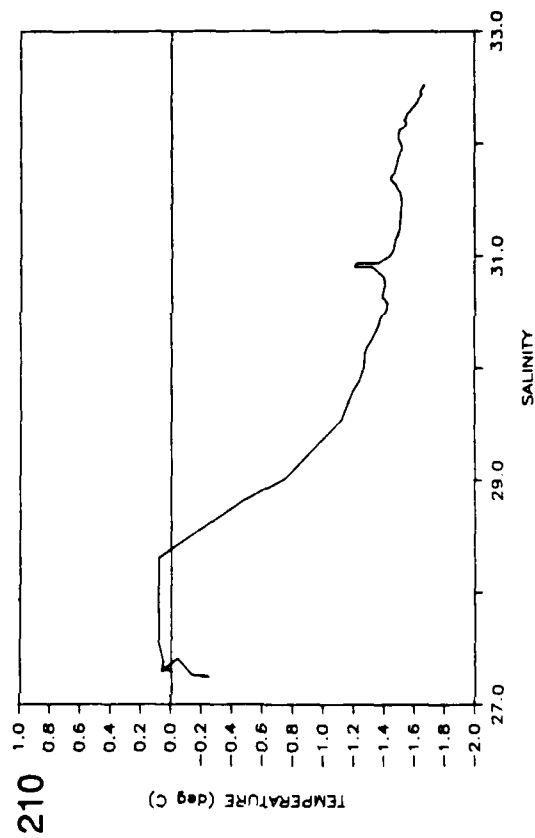
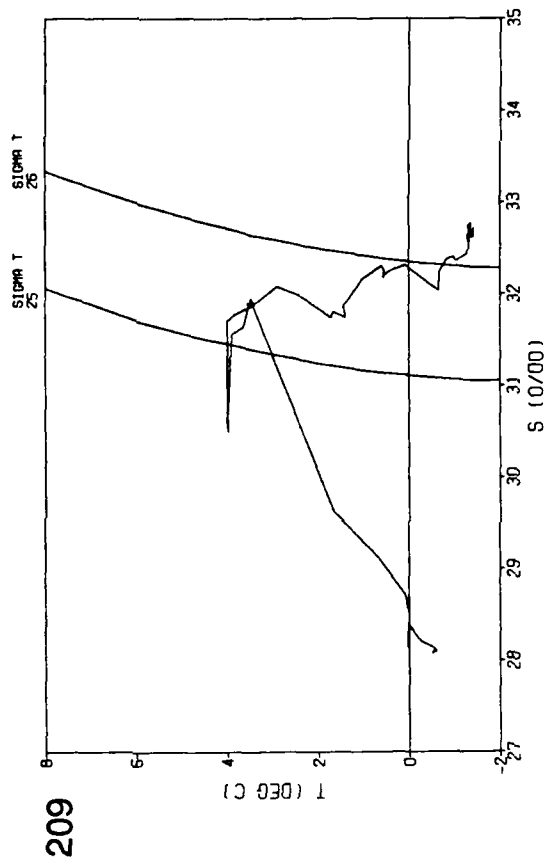
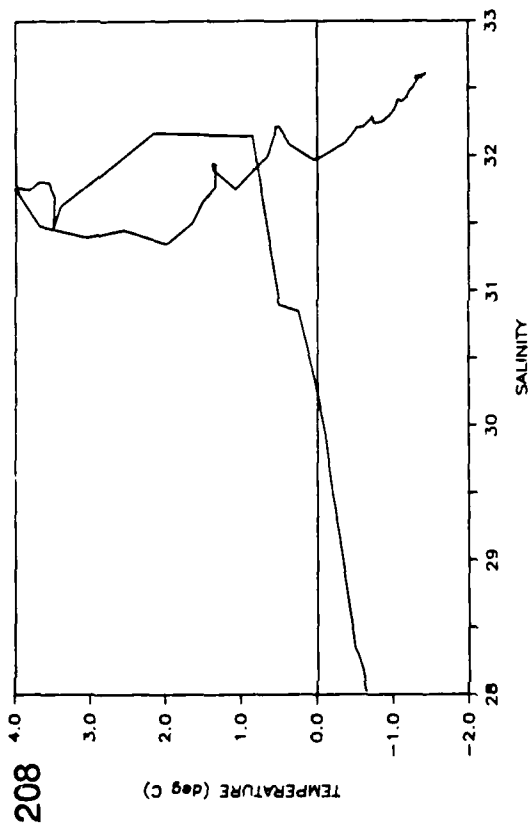




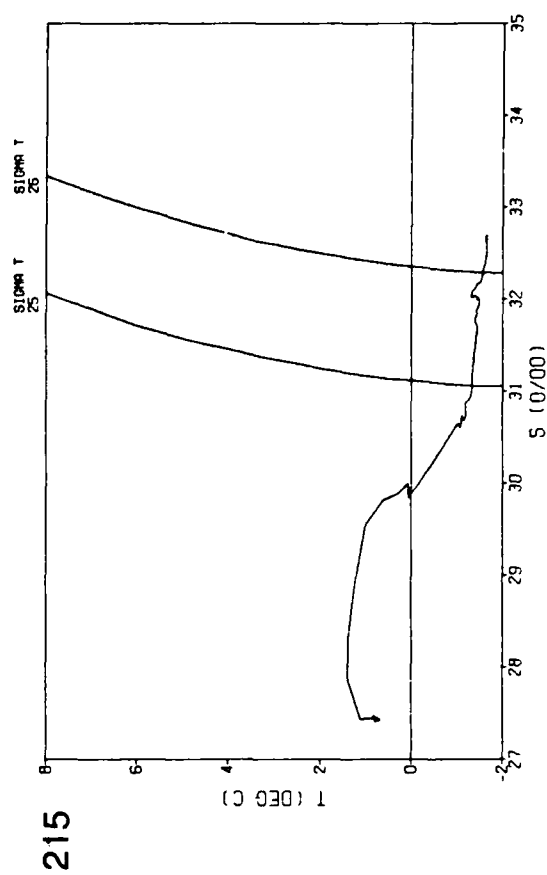
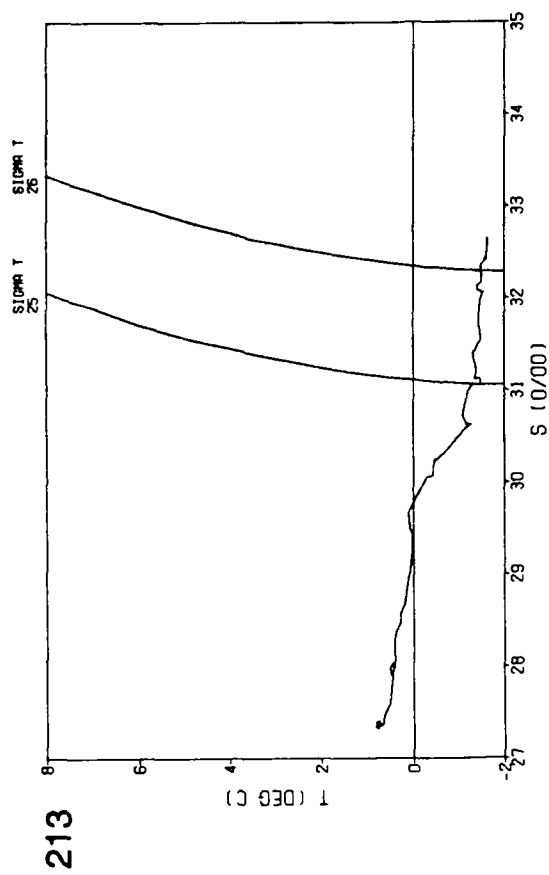
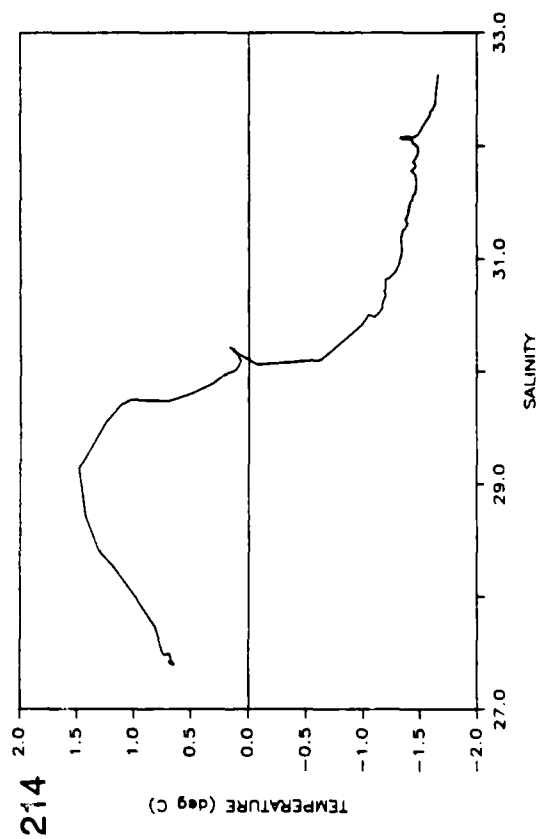
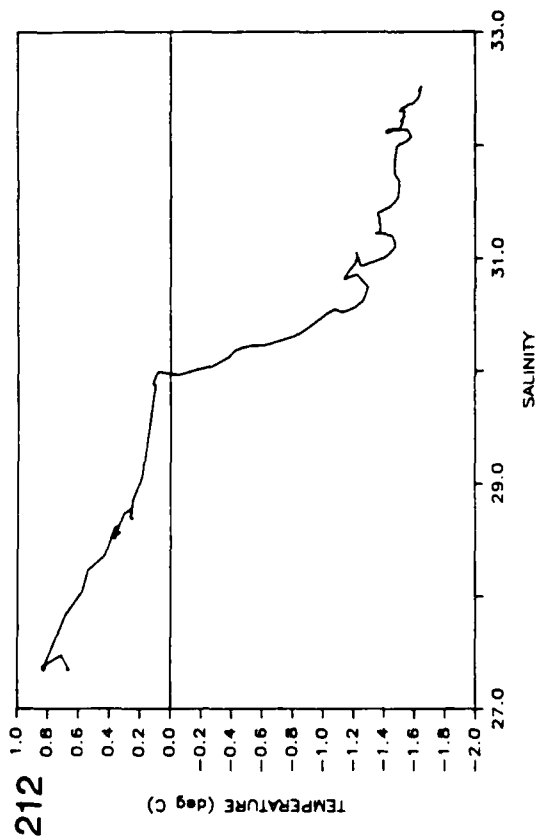
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200	X		256	0455	Ship	71 4.1	160 28.2
201		X					
202	X		256	0527	Ship	71 6.1	160 33.8



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
208			256	0713	Helo	71 16.7	160 42.8
209	X	X	256	0713	Helo	71 16.7	160 42.8
210	X		256	1447	Helo	71 36.9	159 7.3
211		X	256	1447	Helo	71 36.9	159 7.3



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
212	X		256	1555	Ship	71 31.5	159 2.2
213		X					
214	X		256	1647	Ship	71 28.1	158 59.5
215		X					



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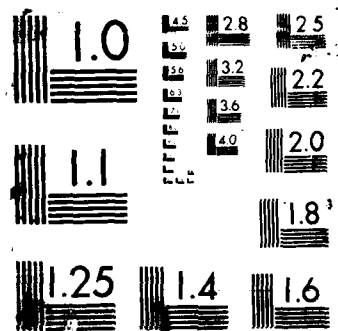
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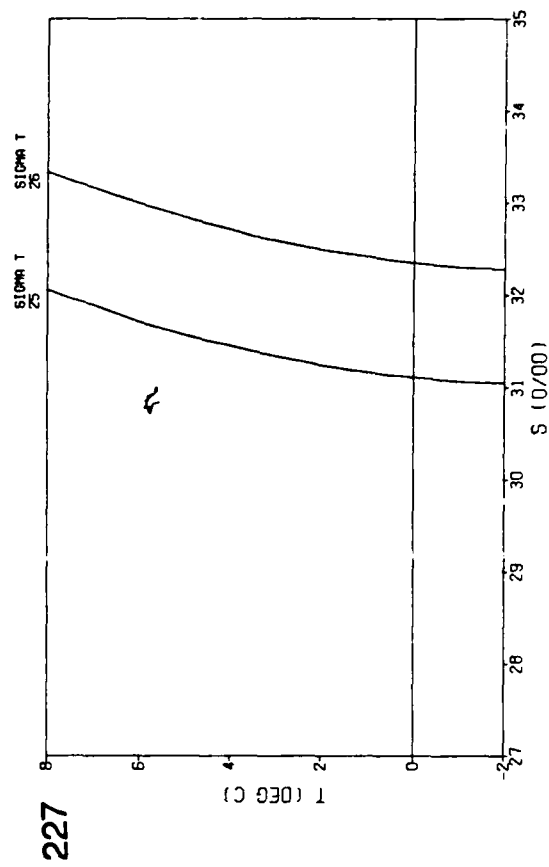
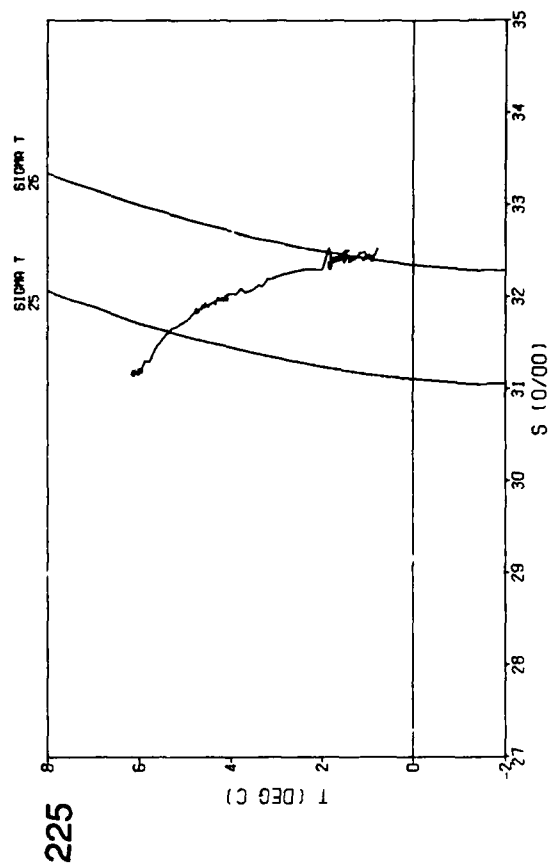
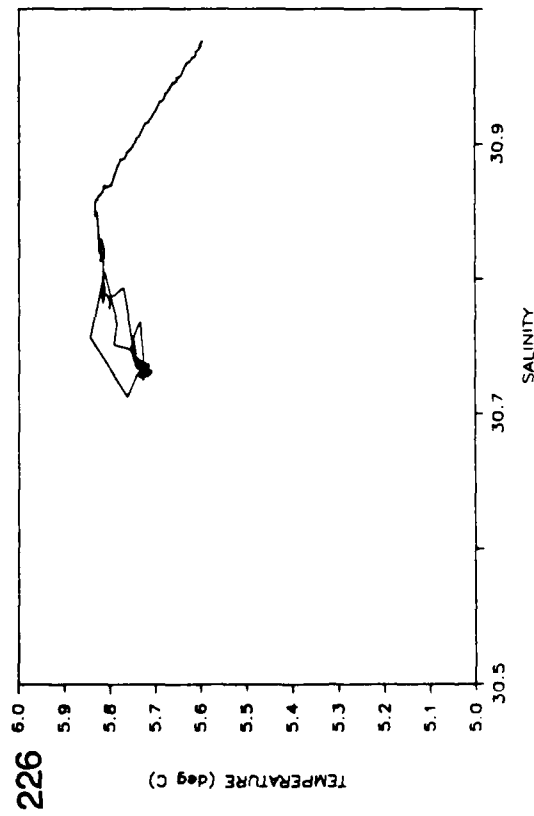
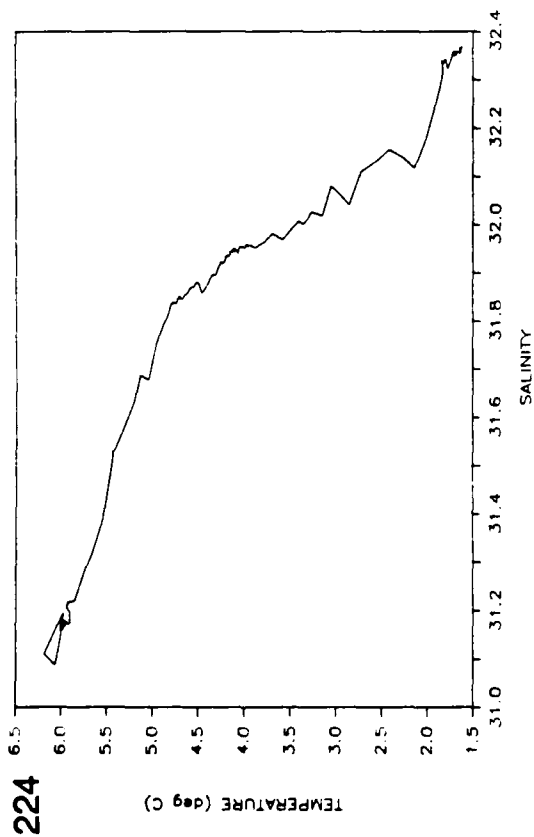
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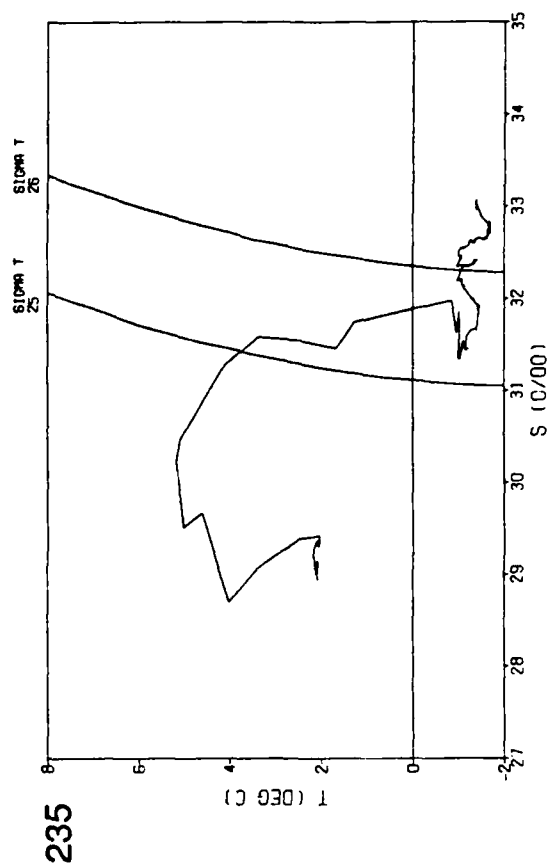
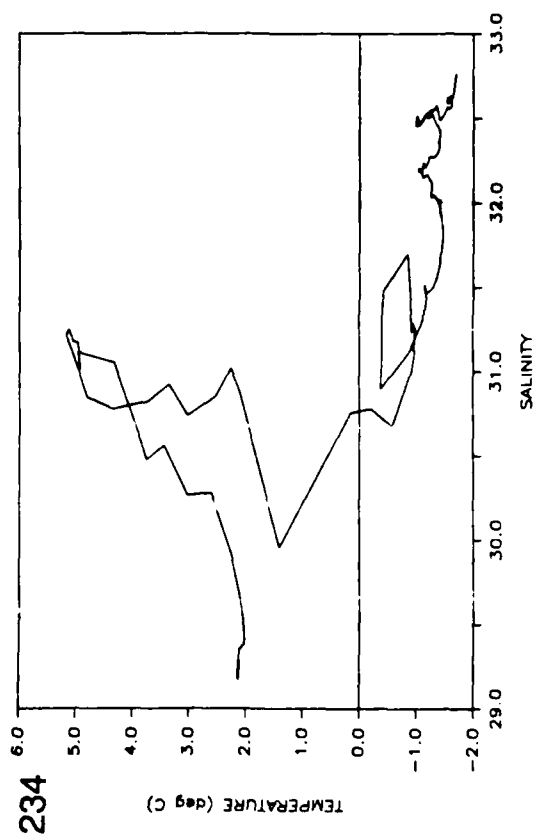
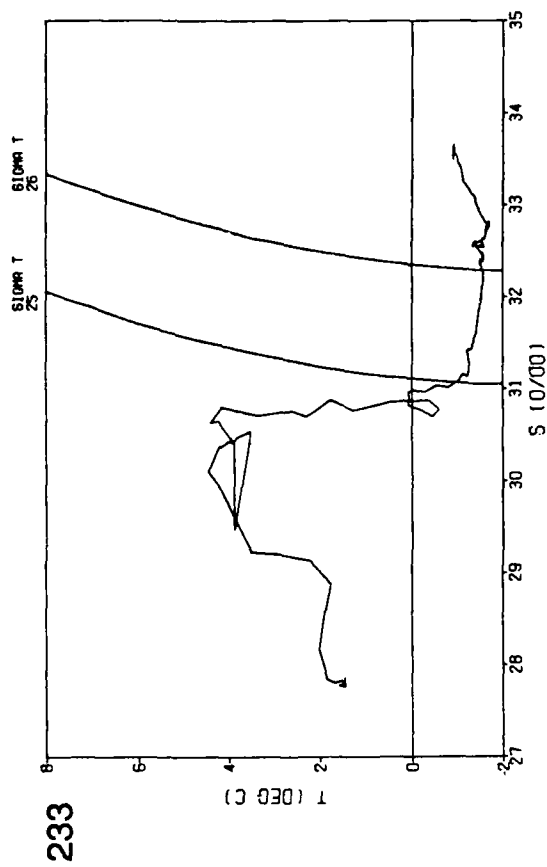
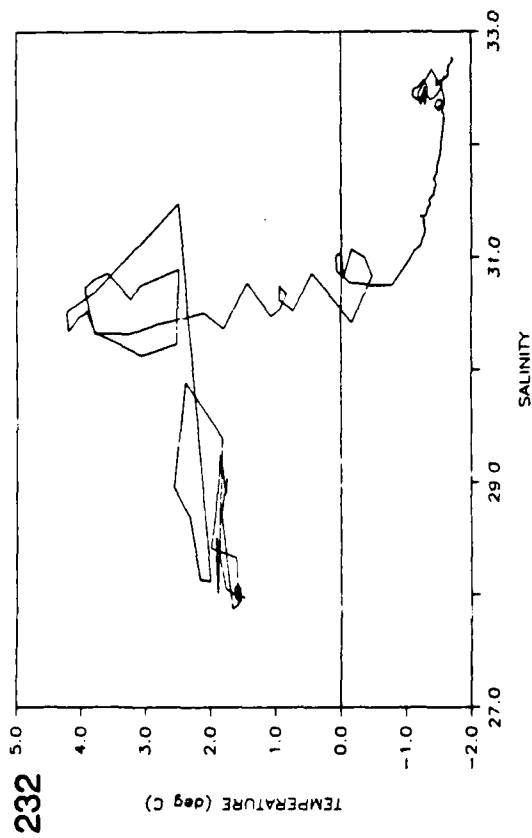




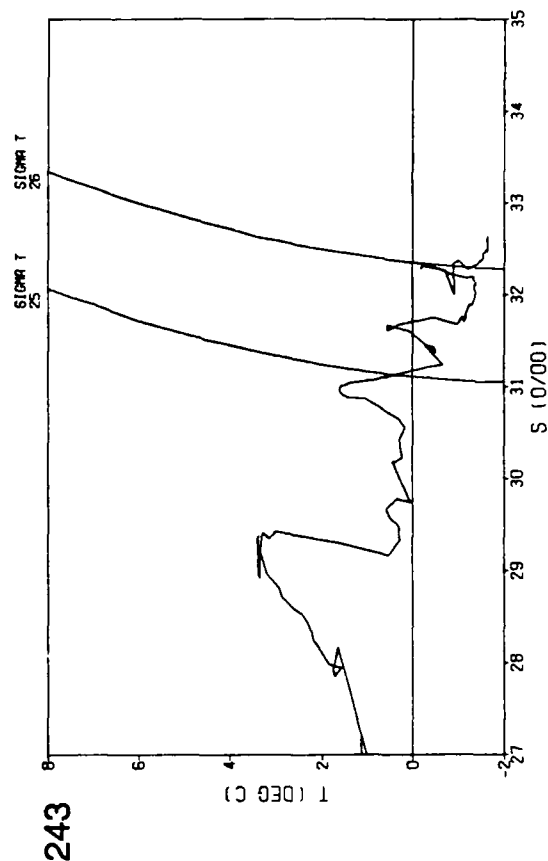
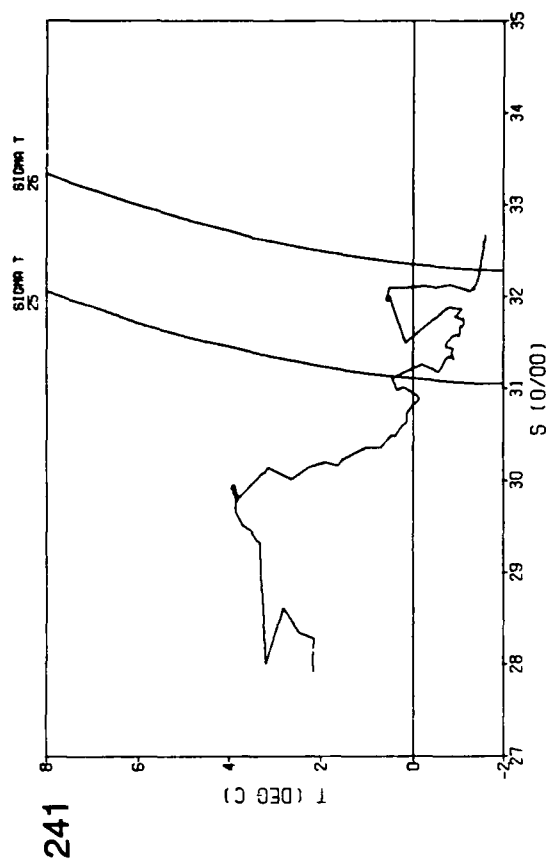
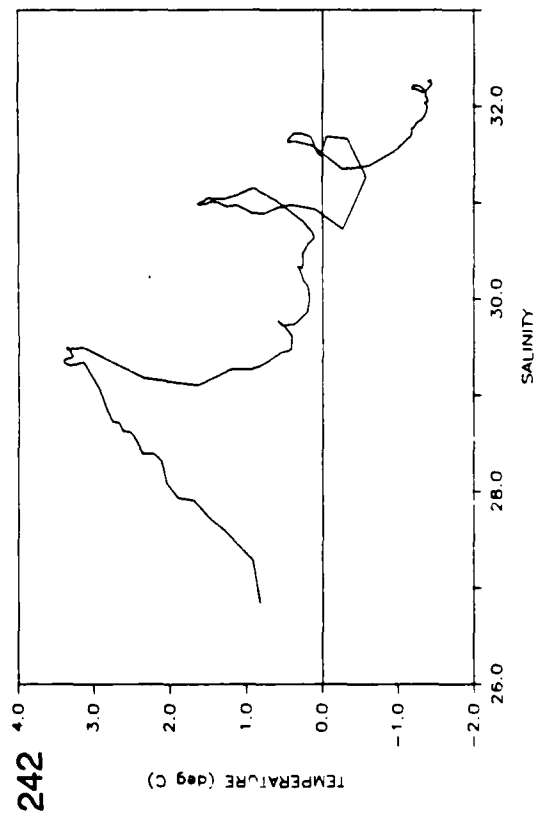
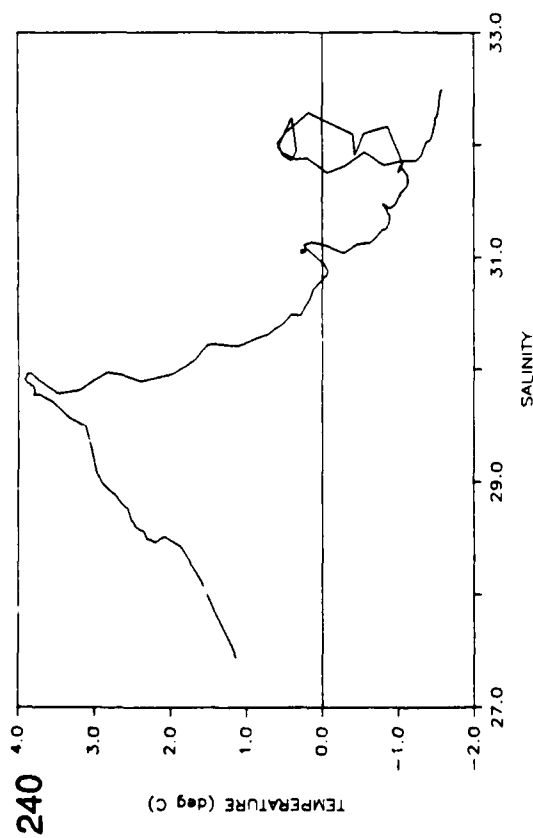
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225	X	X	256	2017	Ship	71 13.7	158 43.8
226	X		256	2131	Ship	71 8.8	158 38.2
227		X	256	2131	Ship	71 8.8	158 38.2



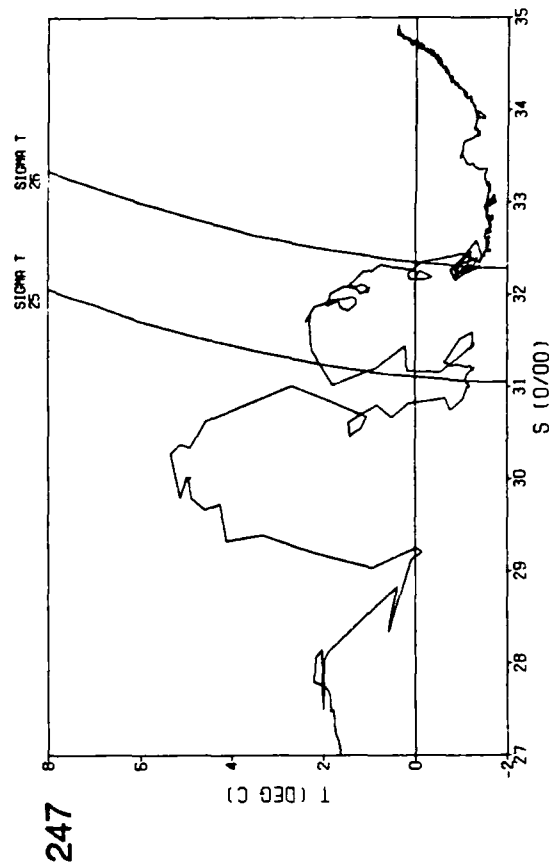
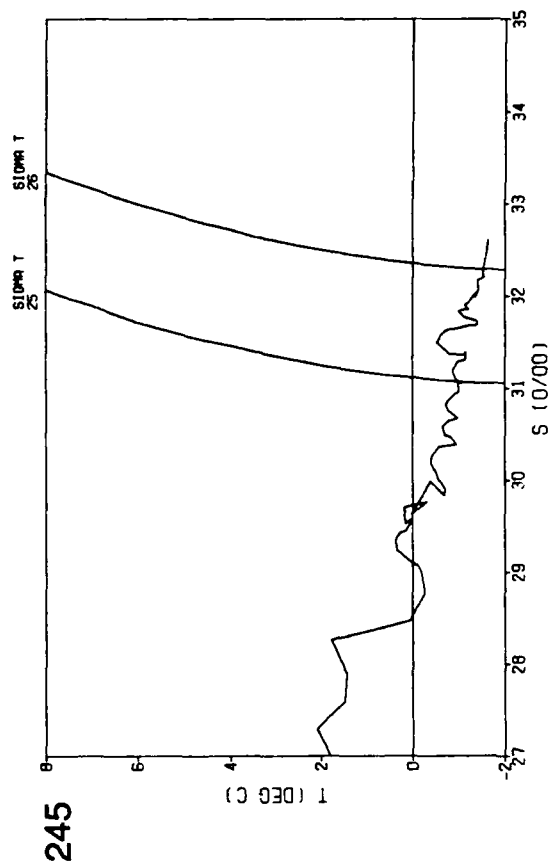
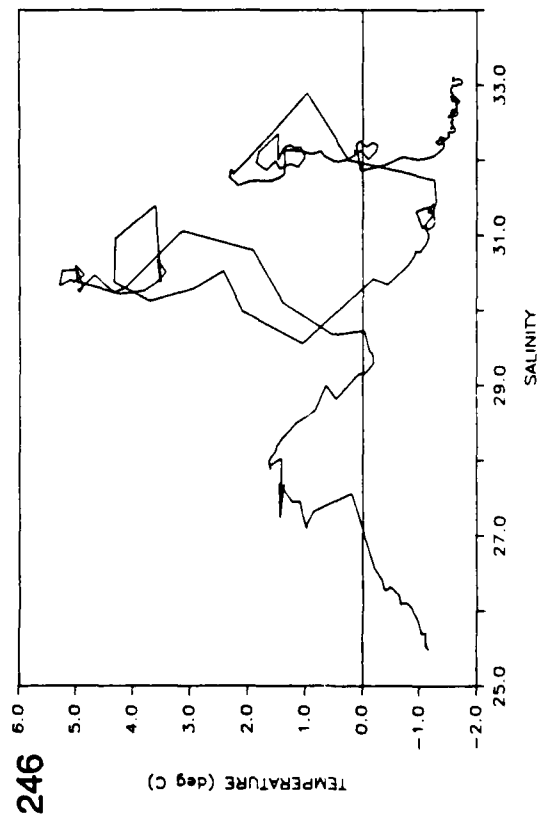
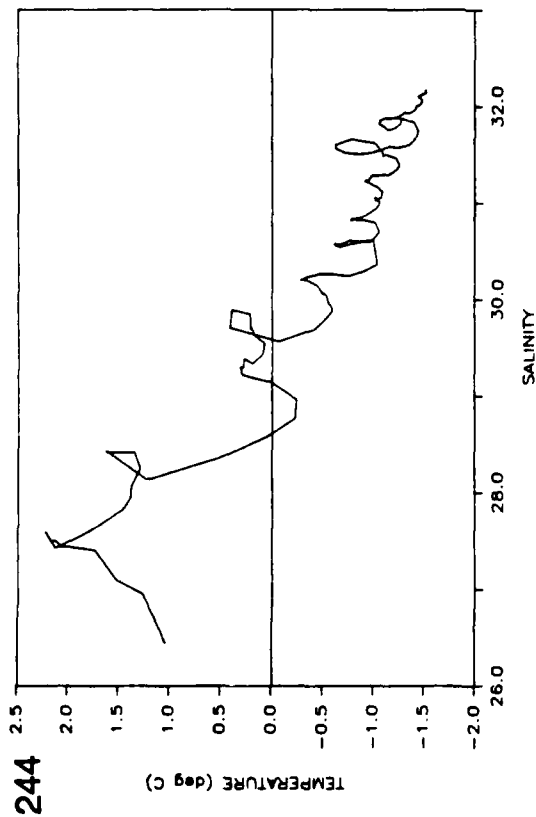
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233	X	X	257	0426	Ship	71 37.1	157 1.7



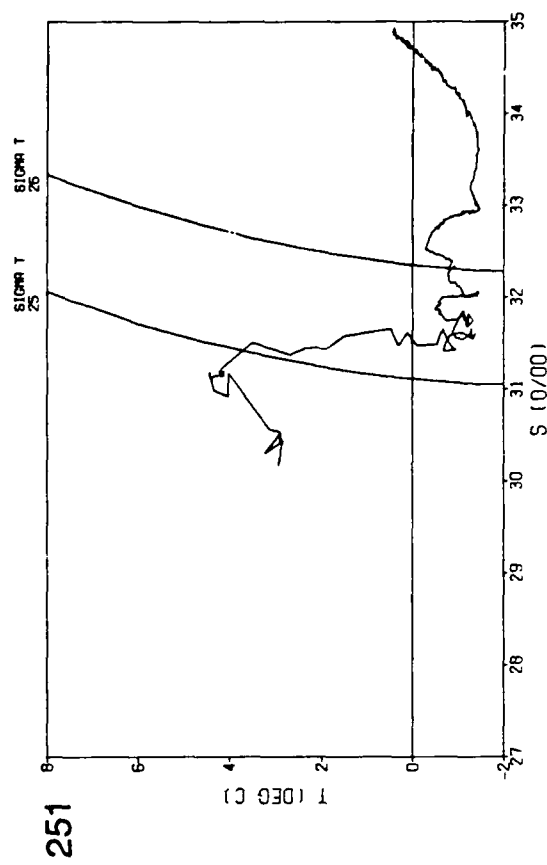
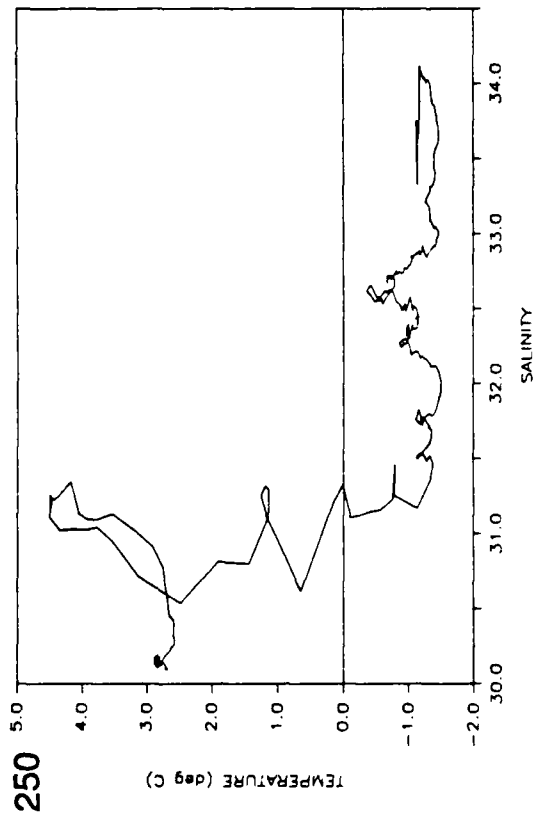
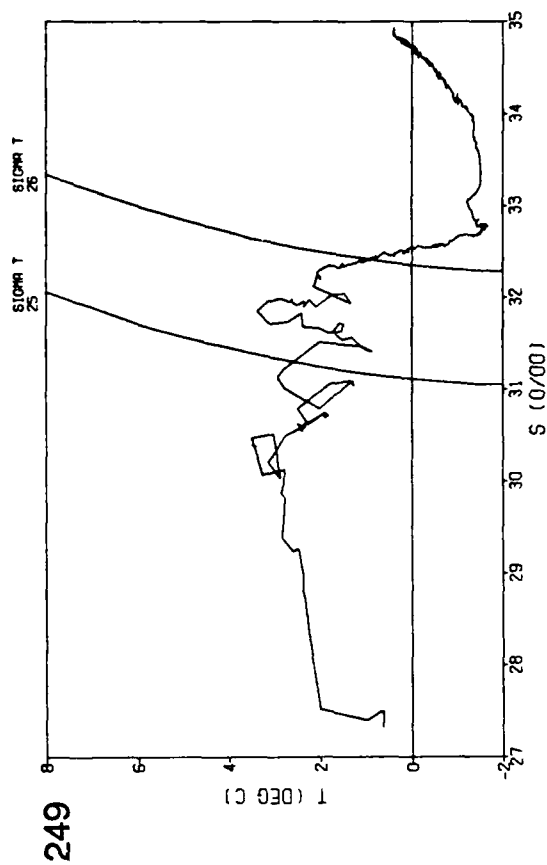
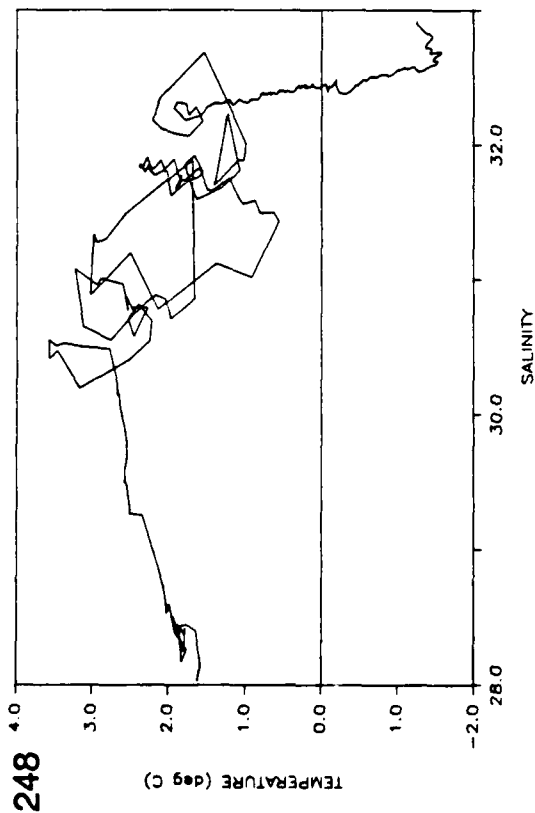
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242	X		257	0659	Ship	71 48.2	157 14.8
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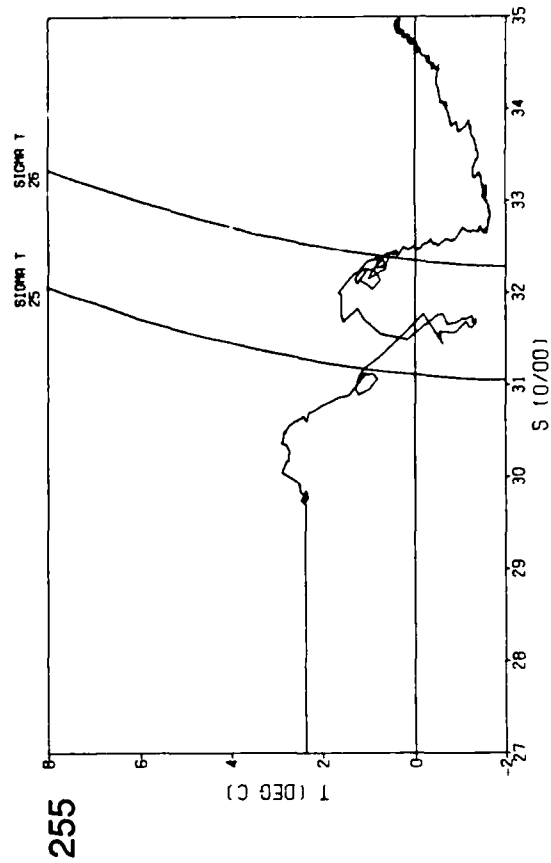
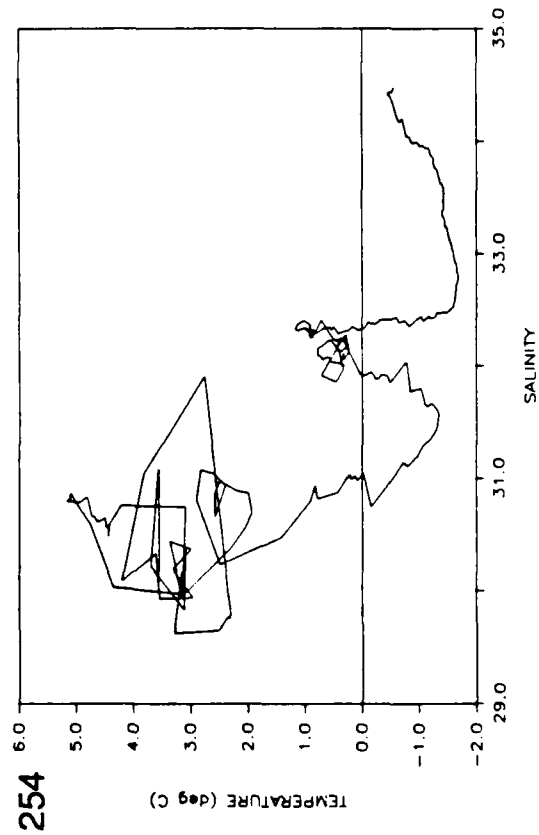
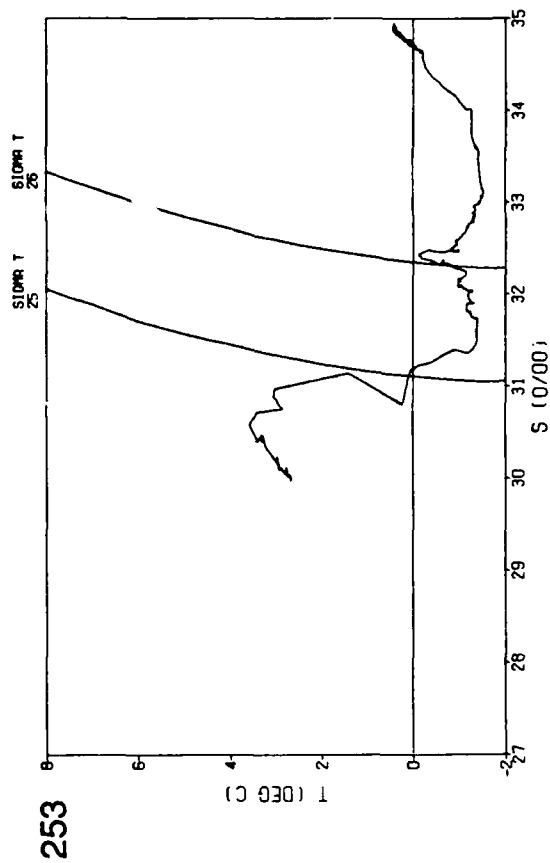
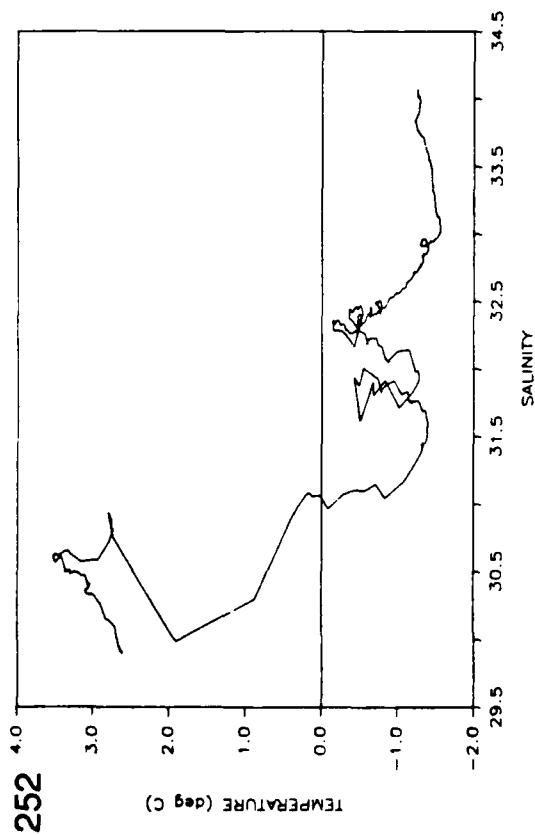
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246							
247							



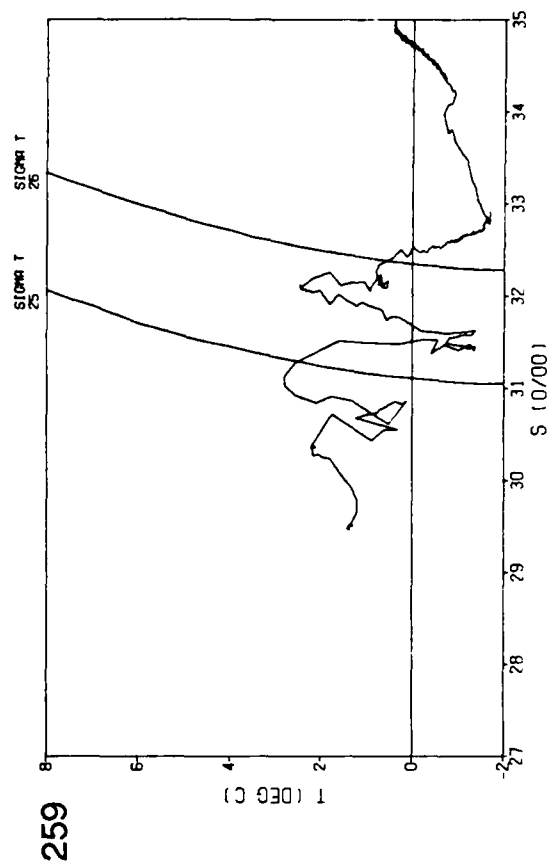
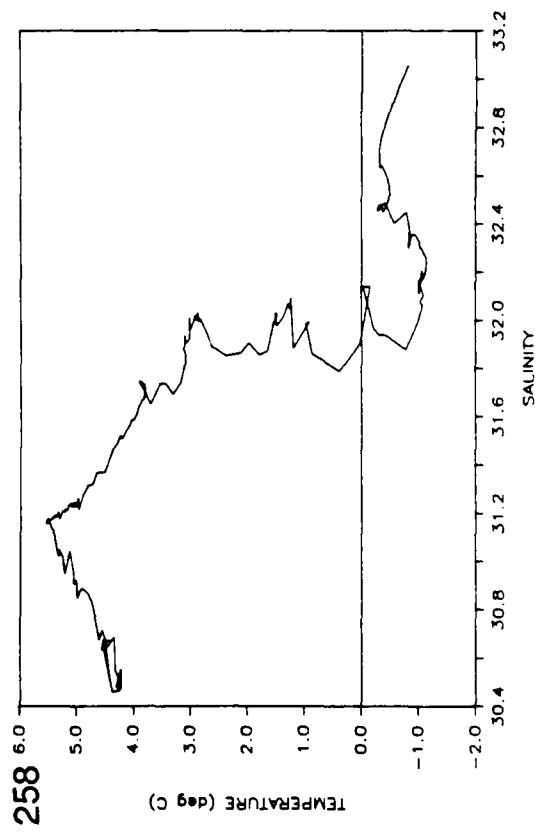
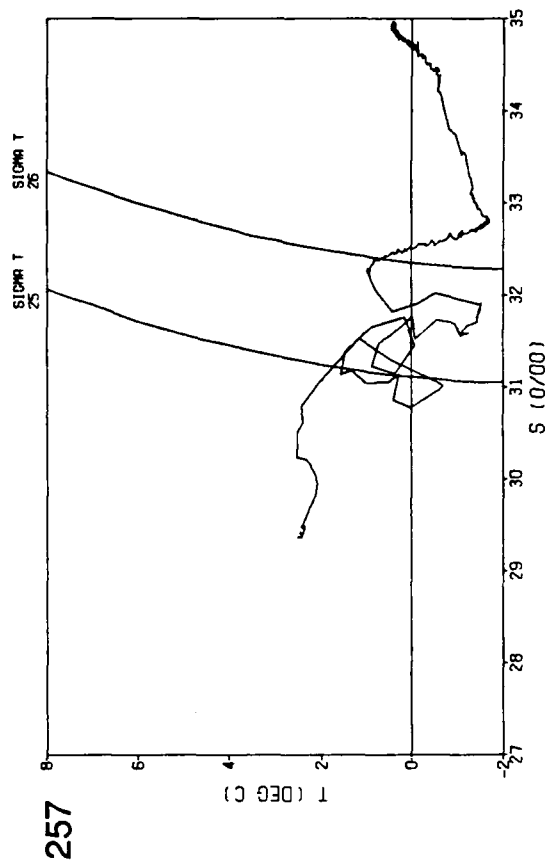
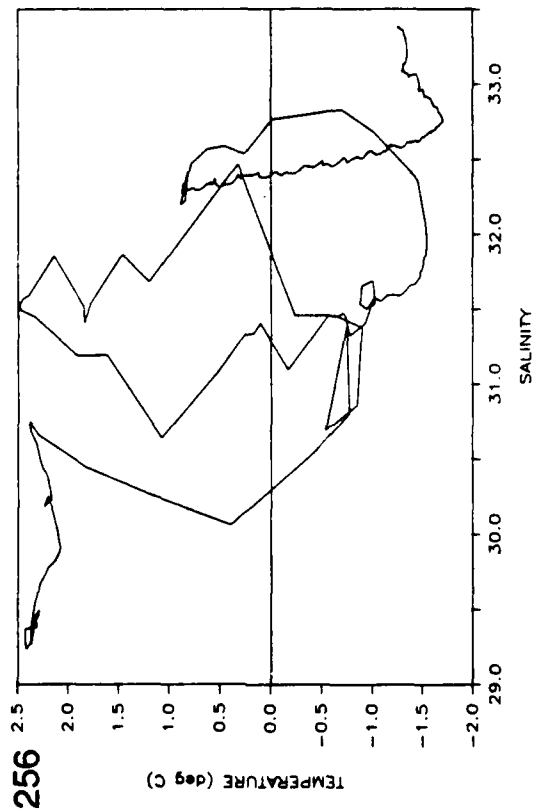
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248	X		257	1704	Ship	71 59.7	155 25.3
249	X		257	1802	Ship	71 56.8	155 21.8



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
252	X		257	1855	Ship	71 54.0	155 17.7
253		X					
254	X		257	2016	Ship	71 50.2	155 13.3
255		X					

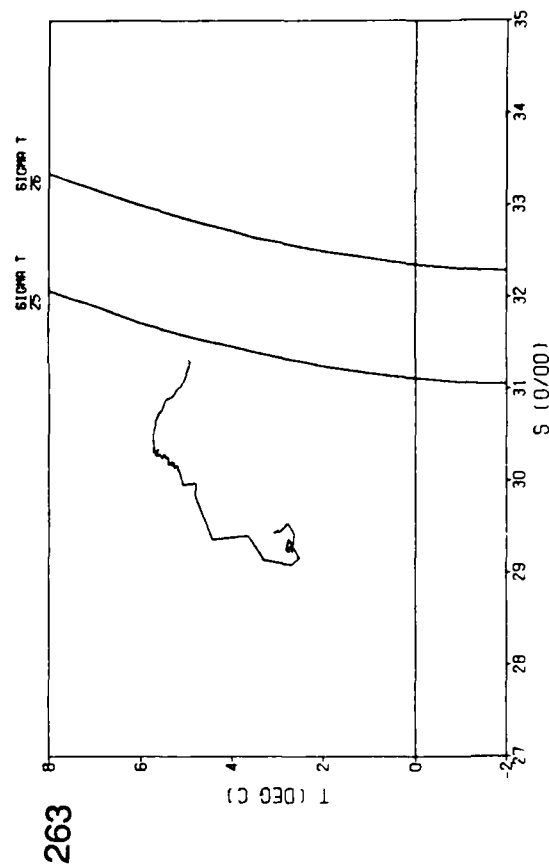
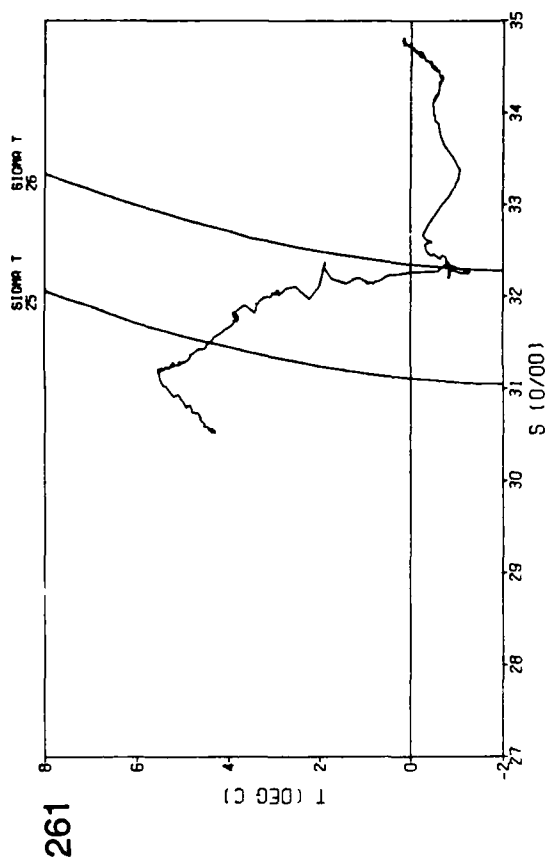
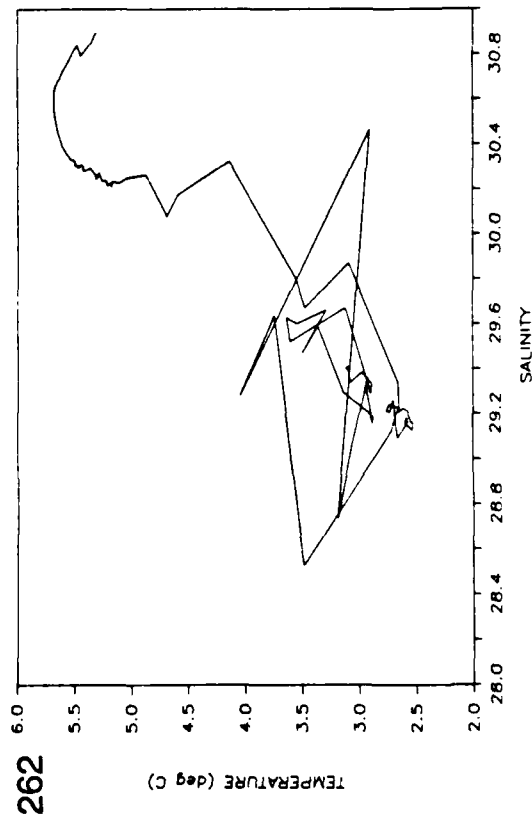
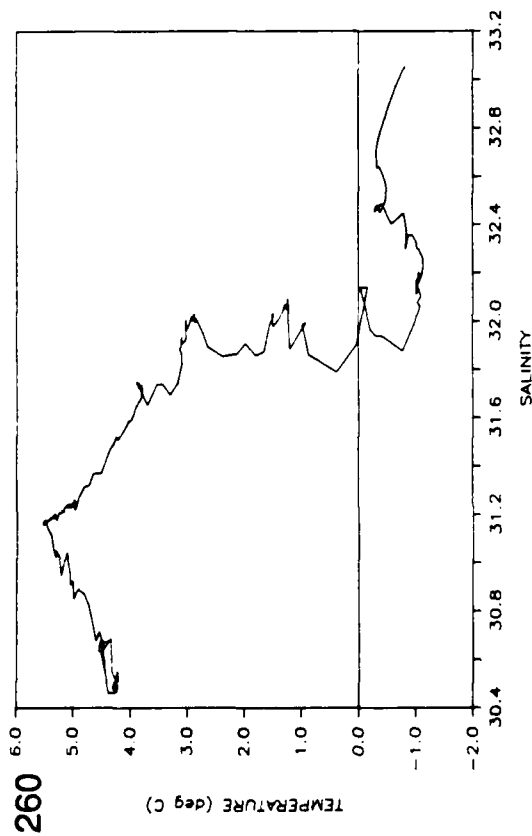


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256	X		257	2109	Ship	71 48.5	155 11.6
257		X	257	2210	Ship	71 45.6	155 8.2



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm
260	X		257	2313
261	X	X	258	0046
262	X			
263		X		

Platform	Latitude	Longitude
Ship	71 42.8	155 4.5
Ship	71 33.7	154 49.9



APPENDIX C

Surface Conditions in Prior Years

This appendix contains surface temperature and salinity plots for several earlier cruises.

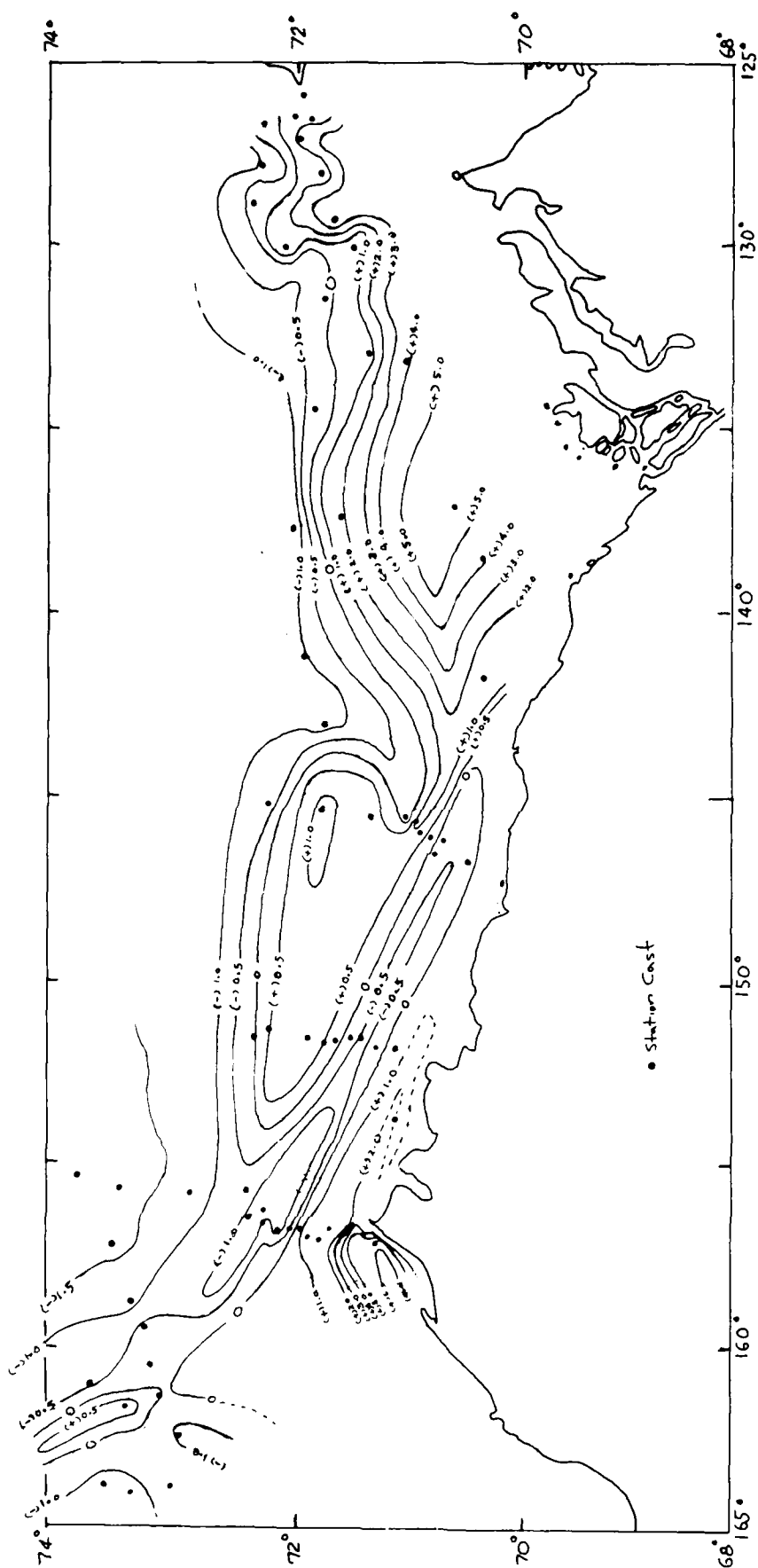


Figure C-1A. Burton Island cruise, July - September 1950, surface temperatures (°C).

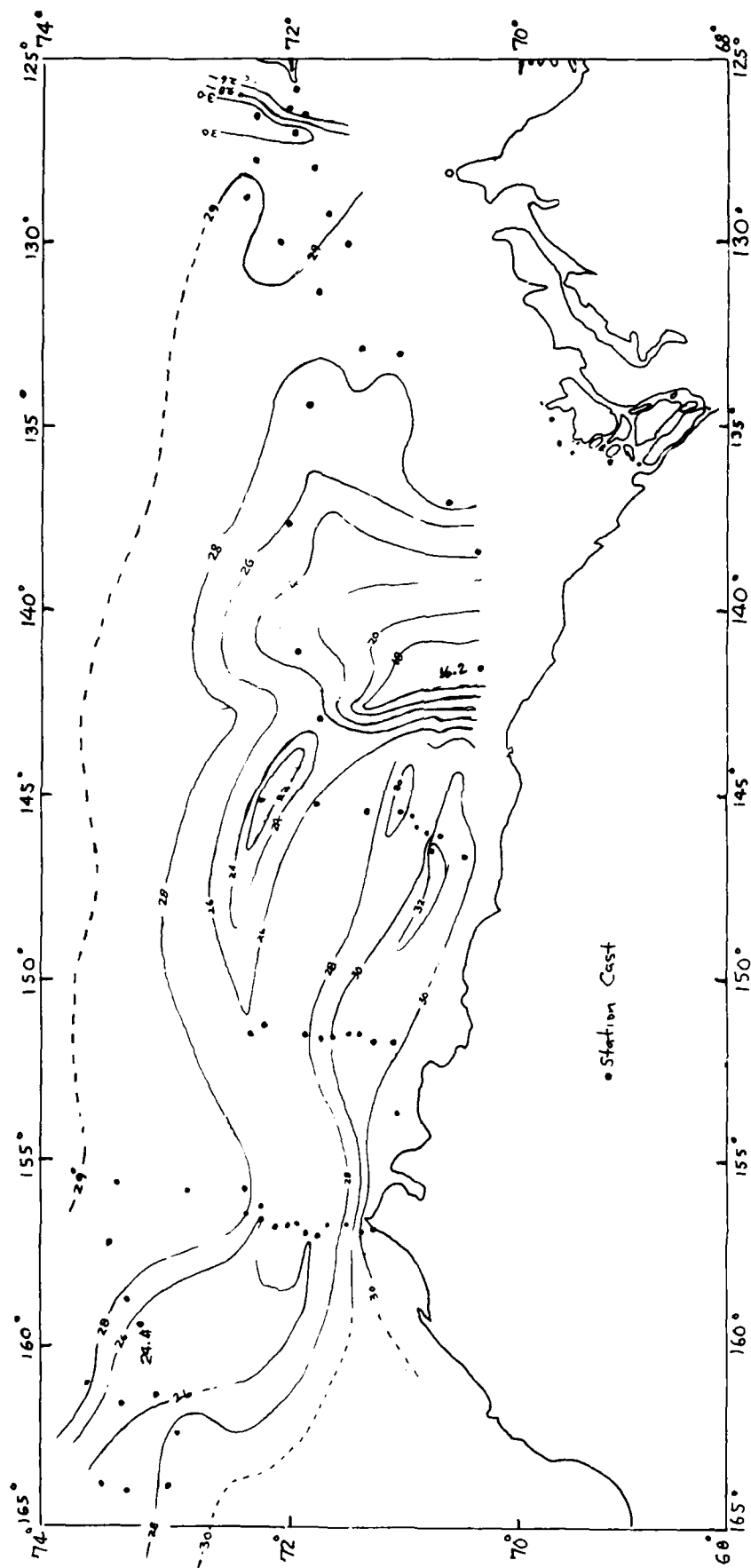


Figure C-1B. Burton Island cruise, July - September 1950, surface salinities (‰).

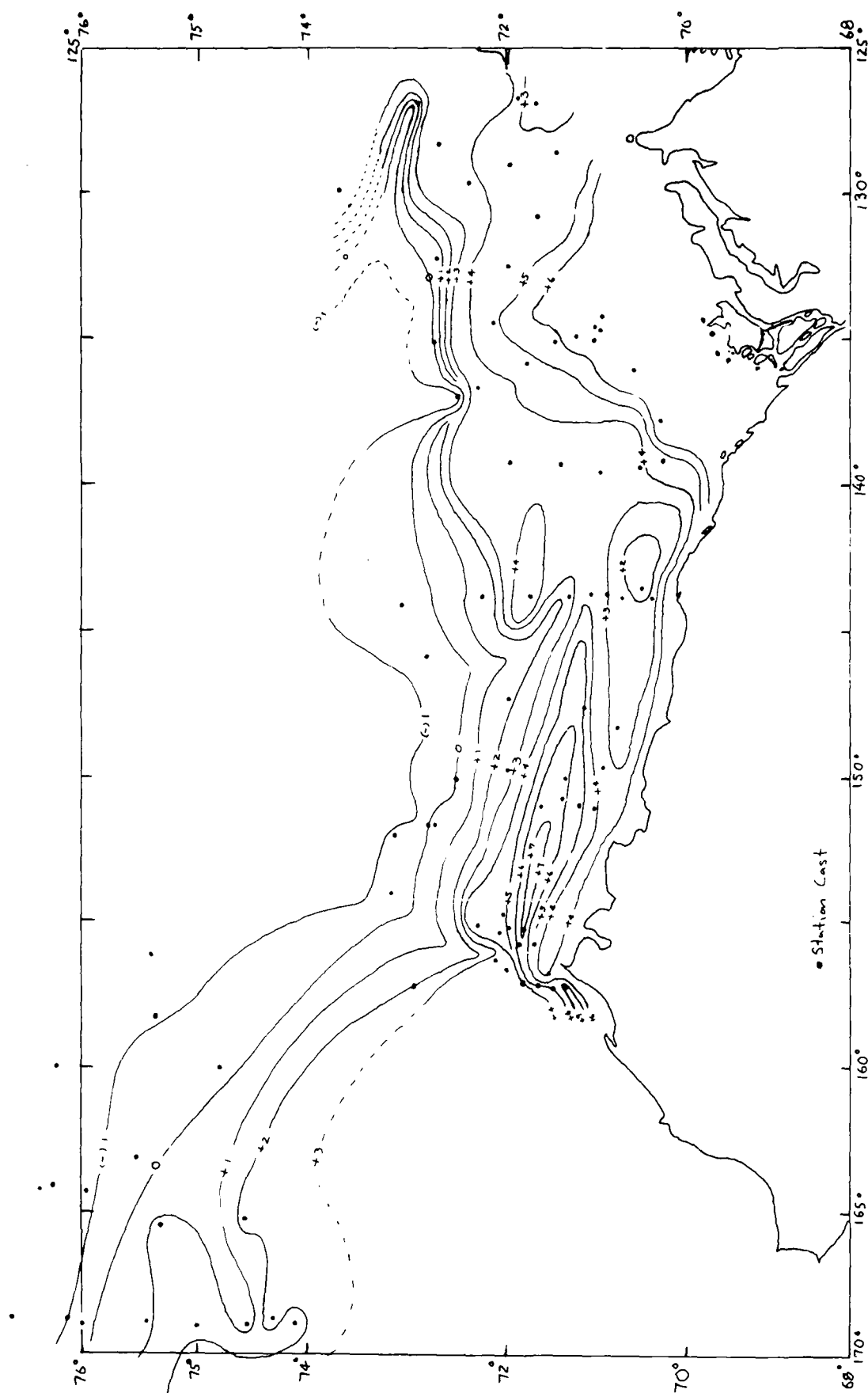


Figure C-2A. Burton Island cruise, August - September 1951, surface temperatures ($^{\circ}\text{C}$).

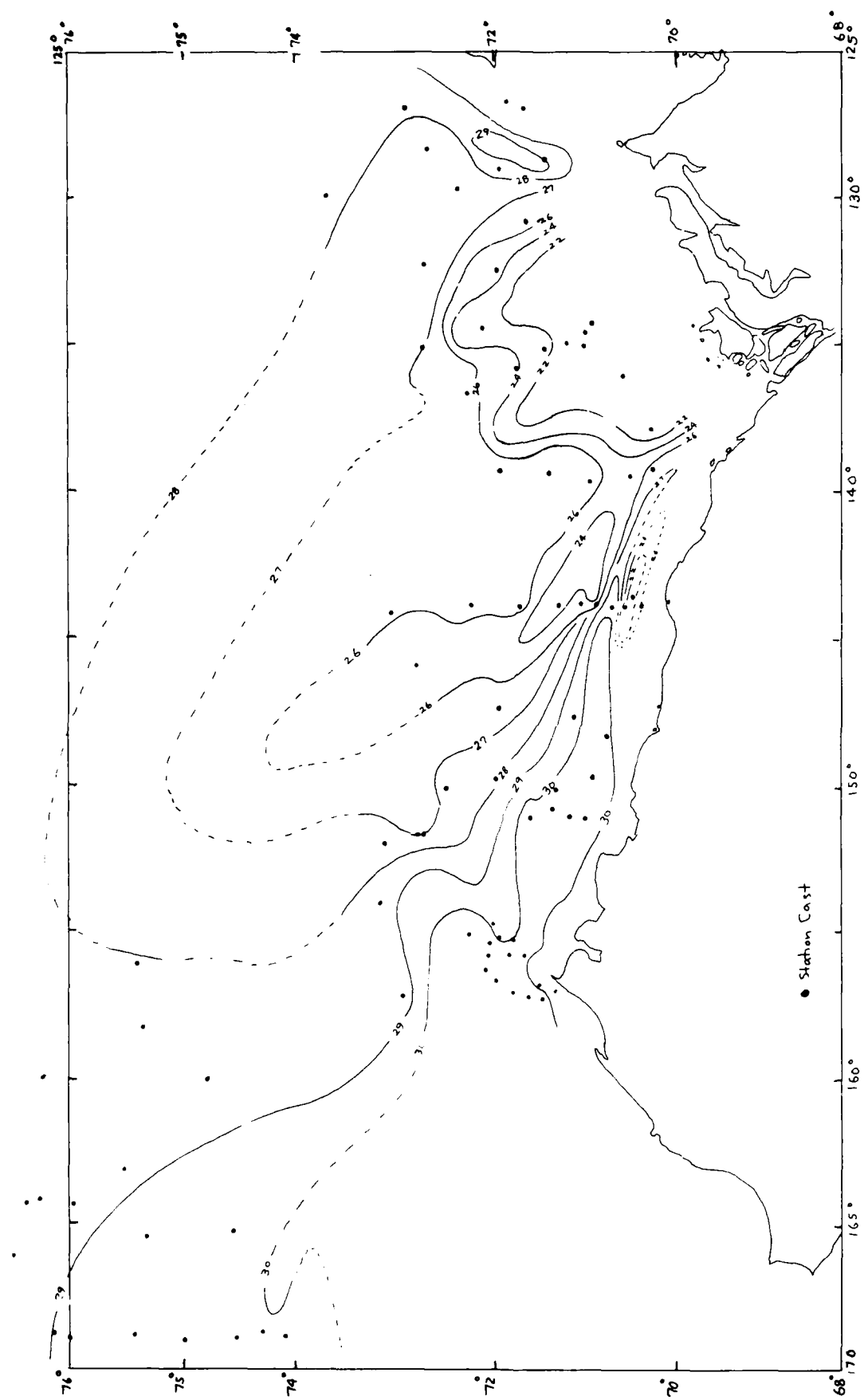


Figure C-2B. Burton Island cruise, August - September 1951, surface salinities (‰).

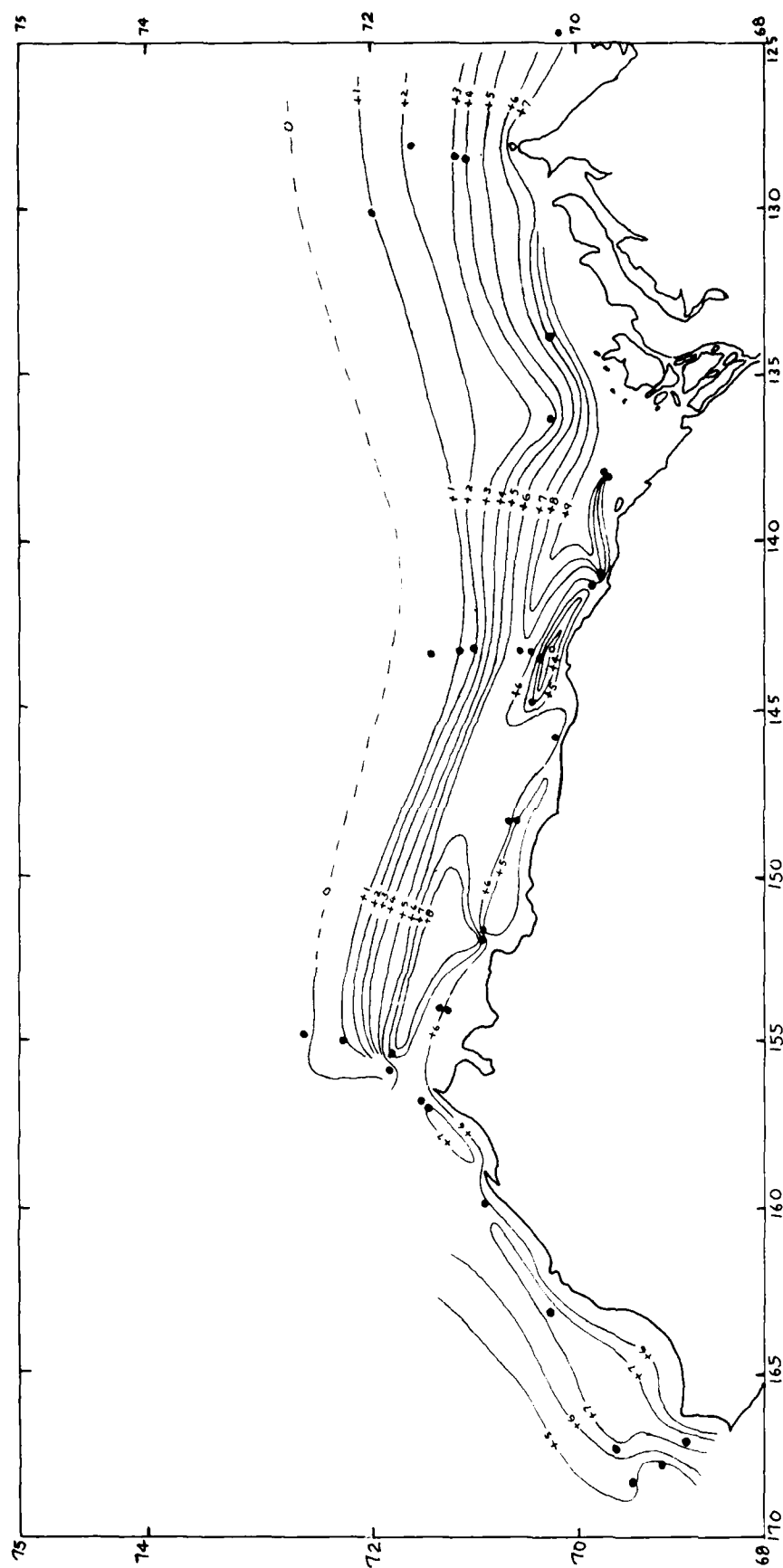


Figure C-3A. Atka cruise August 1957, surface temperatures ($^{\circ}\text{C}$).

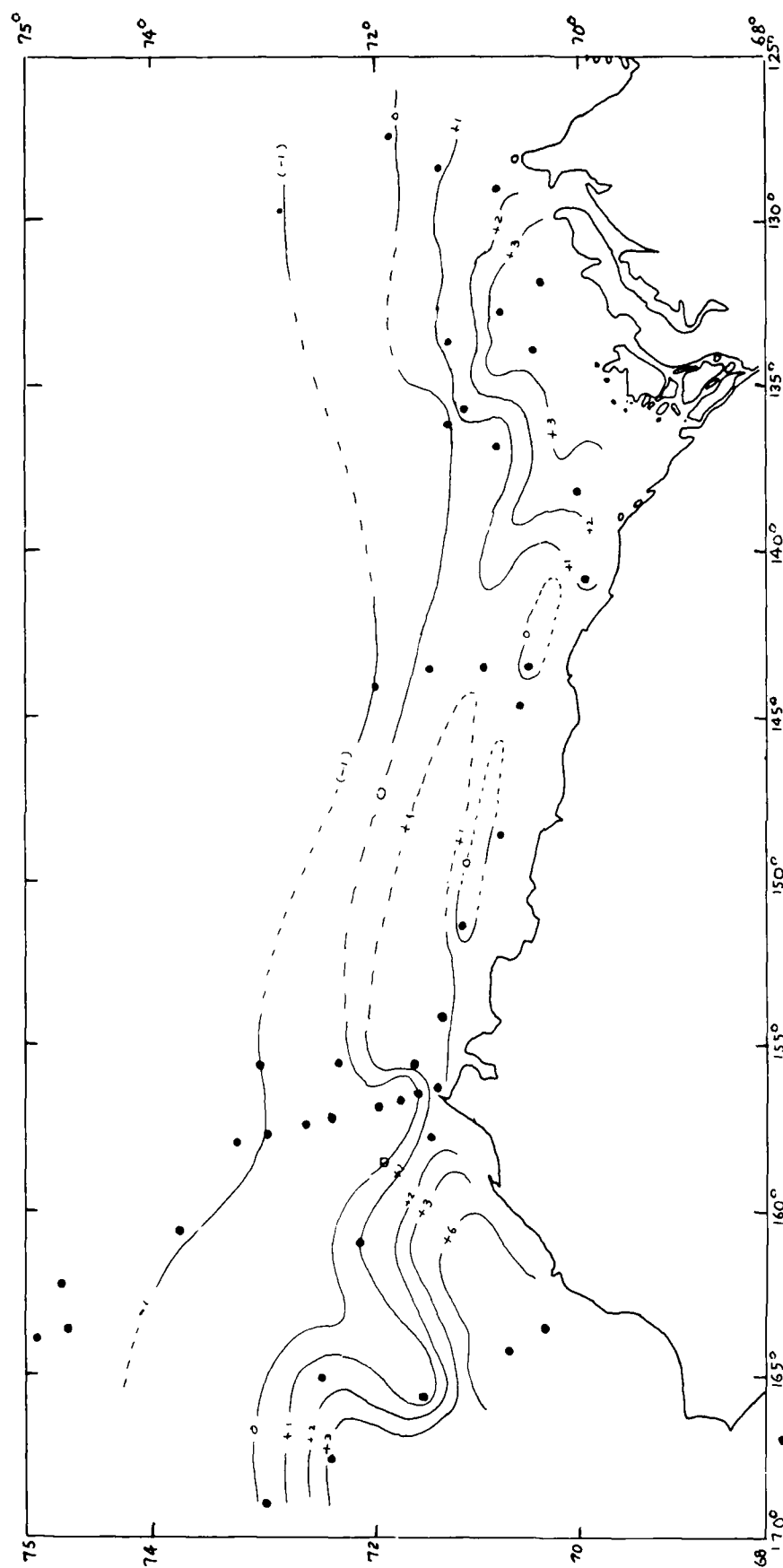


Figure C-4A. Staten Island cruise, August - September 1959, surface temperatures ($^{\circ}\text{C}$).

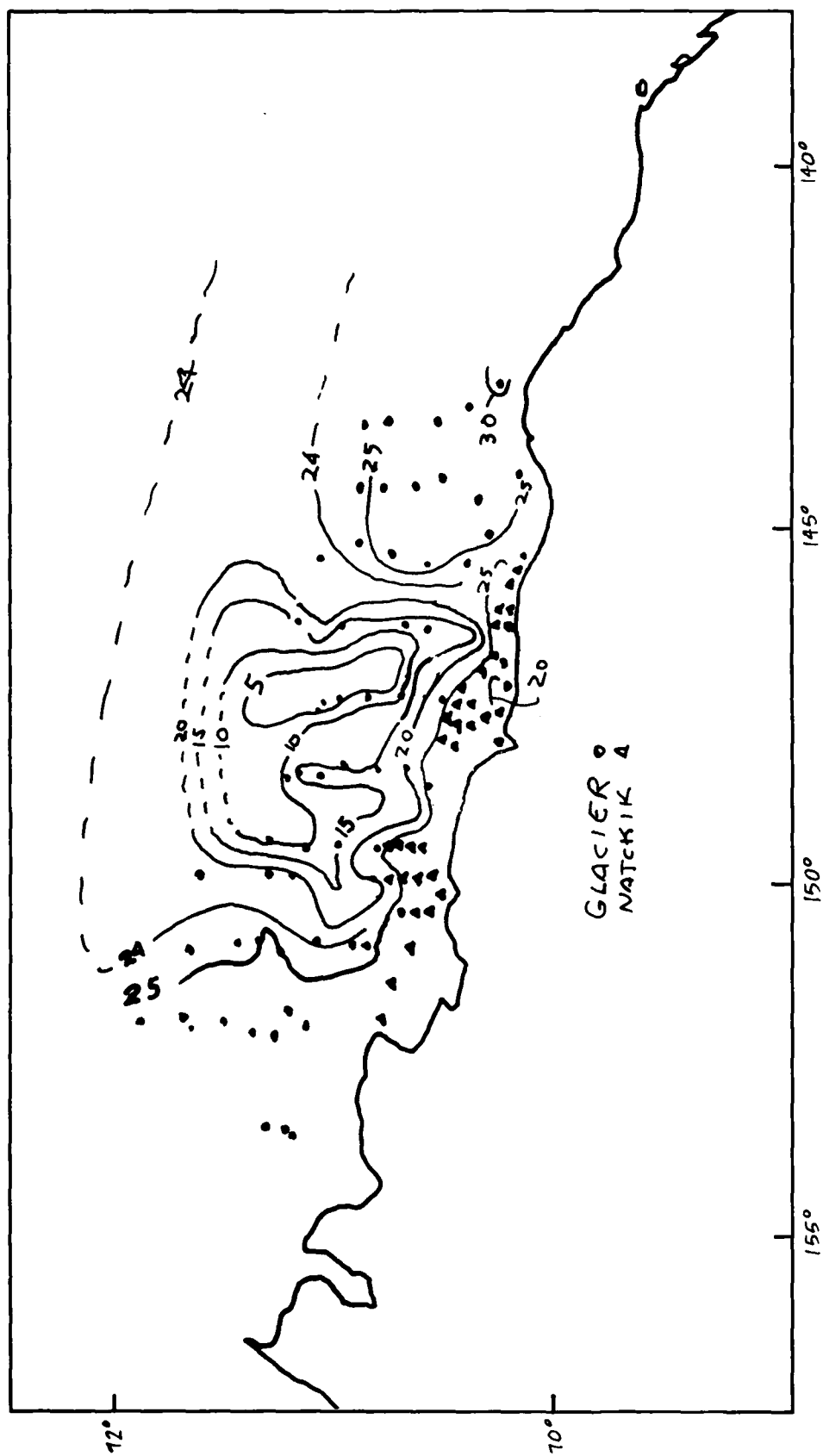


Figure C-5. Glacier and Natchik cruises, August - September 1972, surface salinities (‰).

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is about 148°W longitude, and the westward progression of the Mackenzie River water about 141°W longitude. The ice and weather conditions during the survey appeared to influence water exchange.

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